

# **HYPERFLUTE**

DOCUMENTATION

## HYPERFLUTE VER.1 (12.07.2020)

In this document you find important information about the HYPERFLUTE Sample Library.

Hyperflute is a complete sample library of flute sounds, including all extended techniques, ranging from Contrabass flute up to the piccolo flute.

The library includes recordings from all modern traverse Böhm flutes, which means: C-flute, bass flute, alto flute, piccolo and double-bass flute, including all the extended techniques known to them. Many of these techniques are unknown to the most and were not yet covered in other sample libraries.

## INSTRUMENTS

- C-Flute: Sankyo 14K handmade with Lafin rose-gold riser and lip plate, B-foot joint, silver open-hole mechanics
- Piccolo: August Richard Hammig with Werner Fisher rosewood head joint
- Alto Flute: Eva Kingma full silver body and open hole mechanics, F#-foot joint
- Bass Flute: Kotato&Fukushima full silver body with B-foot joint.
- Contrabass Flute in G and C: Christian Jäger, München

## DEVELOPER

Alessandro Baticci is active internationally as a freelance flautist, composer and electroacoustic performer in the field of contemporary music and sound art. Engagements have taken him to Japan, USA, Russia, Argentina, China, Switzerland, Taiwan, and all over Europe, performing in the most important venues and festivals such as Salzburger Festspiele, Lucerne Festival, Elbphilharmonie, Warsaw Autumn, Wiener Festwochen, Wien Modern, Klangspuren Schwaz, Transart, IRCAM, Darmstadt Ferienkurse, IMPULS, Wiener Musikverein and Wiener Konzerthaus.

His dedication to contemporary music led him not only to cooperations with composers such as Beat Furrer, Tristan Murail, Salvatore Sciarrino and Brian Ferneyhough, but also to an intensive activity in the field of sound installations,

performative art and electroacoustic composition, working actively with young composer and artists on new languages of expression in music.

His inventive approach brought him to develop various prototypes of electro-acoustical instruments, digital control and mapping systems as well as sound and ergonomic solutions for acoustic instruments. Alessandro combines also an extensive knowledge in product and interface design and has been lecturer in various universities in Europe.

Born in Milan, Italy, Alessandro started his musical education at a very early age. He pursued his studies in composition, flute, sound engineering as well as multimedia art in Vienna (Universität für Musik und darstellende Kunst und Universität für Angewandte Kunst Wien). Various masterclasses in flute with among others Eva Furrer and Mike Schmid and in composition with B.Ferneyhough, Y. Robin, I. Mundry and others.

He received many awards such as the 2nd prize at the Ernst Krenek composition competition for his work *Night-Thoughts* for string orchestra and live-electronics as well as the 6th prize at the 2014 International Flute Competition in Krakow. In 2019 he received the *START Stipendium* Grant from the Federal Chancellery of Austria.

Alessandro is member and co-founder of The Black Page Orchestra, an ensemble for radical and uncompromising music of our time as well as the founding member of the composer-performer Duo Nimikry. Since 2018 he is a Luzern Festival Academy Alumnus as well as fellow of *Akademie Musiktheater heute* by Deutsche Bank Stiftung.



## GENERAL INFORMATION

Technique	number of samples	range	instruments
Staccato	858	C0-C6	All
Sustain	369	C0-C6	All
Internal Air Sustain	250	A-1 - E4	All
Jet Whistle (internal air "short")	28	B0-A#1	Flute in C
Slap tongue	391	F#0-B4	All
Internal Slap tongue	268	F-1 - E3	All
Tongue Ram	273	A-1 - E3	All
Key Clicks open		A-1 - E3	All
Key Clicks closed			All
Whistle Tones	186	2 octaves	All
Multiphonics	295	-	All
Air open (accents)	327	G0-G5	All
Internal tremolo	85	B-1 - D#1	Double bass flute in C
Harmonic Glissando	50	B-1-G0	Double bass flute in C
Tongue Ram	117	B-1 - D#1	Double bass flute in C
Key clicks closed	131	B-1 - D#1	Double bass flute in C

## MIDI ROUTING AND CC

- Hyperflute Percussion

MIDI CC routing	parameter
CC14	Slap
CC15	Key Clicks
CC16	Tongue Ram
CC17	Staccato
CC18	Slap Slider
CC19	Key Slider
CC120	Slap Button
CC121	Key Clicks Button
CC122	Tongue Ram Button
C123	Staccato Button

Shortcuts:

Mac: Command-Click – reset EQ parameters

Windows: Control-right click – reset EQ parameters

- Hyperflute Sound

CC1	(Mod. Wheel) Expression Controller	(if expression button is activated)
CC14	Vibrato	
CC15	Sustain Staccato	
CC16	Focus Sustain	
CC17	Focus Staccato	

Similar MIDI CC settings were applied to the single articulations

# PACKAGE CONTENT

- Hyperflute COMPLETE

<b>HYPERFLUTE COMPLETE</b>	<p>A COMPACT CONSOLE WITH ALL ARTICULATIONS TO CHOOSE FROM</p> <p>ARTICULATIONS INCLUDED:</p> <ul style="list-style-type: none"><li>• Staccato</li><li>• Sustain</li><li>• Internal Air sustain</li><li>• Jet Whistle (internal air "short")</li><li>• Air Sound + Air Accents (open)</li><li>• Slap tongue</li><li>• Internal Slap tongue</li><li>• Tongue Ram</li><li>• Key Clicks open</li><li>• Key Clicks closed</li><li>• Whistle Tones</li><li>• Multiphonics</li></ul>
<b>SINGLE INSTRUMENTS</b>	<p>STREAMLINE GUI, TAILORED FX'S</p> <p>ARTICULATIONS INCLUDED:</p> <ul style="list-style-type: none"><li>• Internal Air Sustain</li><li>• Jet Whistle (internal air "short")</li><li>• Slap tongue</li><li>• Internal Slap tongue</li><li>• Tongue Ram</li><li>• Key Clicks open</li><li>• Key clicks closed</li><li>• Whistle Tones</li><li>• Multiphonics</li></ul>

- Hyperflute UPGRADE Bundle

<b>HYPERFLUTE COMPLETE</b>	<p>A COMPACT CONSOLE WITH ALL ARTICULATIONS TO CHOOSE FROM</p> <p>ARTICULATIONS INCLUDED:</p> <ul style="list-style-type: none"> <li>• Staccato</li> <li>• Sustain</li> <li>• Internal Air sustain</li> <li>• Jet Whistle (internal air "short")</li> <li>• Air Sound + Air Accents (open)</li> <li>• Slap tongue</li> <li>• Internal Slap tongue</li> <li>• Tongue Ram</li> <li>• Key Clicks open</li> <li>• Key Clicks closed</li> <li>• Whistle Tones</li> <li>• Multiphonics</li> </ul>
<b>HYPERFLUTE PERCUSSION</b>	<p>COMPACT INSTRUMENT FOCUSING ON PERCUSSIVE ARTICULATIONS WITH TAILORED FX'S</p> <p>ARTICULATIONS INCLUDED:</p> <ul style="list-style-type: none"> <li>• Staccato</li> <li>• Open Slap</li> <li>• Internal Slap</li> <li>• Key Clicks (open)</li> <li>• Key Clicks (closed)</li> <li>• Tongue Ram</li> </ul> <p>SPECIAL FEATURES:</p> <ul style="list-style-type: none"> <li>• Crossfade between techniques</li> <li>• Crossfade between embrochure position</li> <li>• Tailored Dynamic FX's</li> </ul>

<b>HYPERFLUTE SOUND</b>	<p>COMPACT INSTRUMENT FOCUSING ON REGULAR FLUTE SOUND (SUSTAIN+STACCATO) INCLUDING A CROSSFADE TO AIR SOUND AS WELL AS TAILORED FX'S</p> <p>ARTICULATIONS INCLUDED:</p> <ul style="list-style-type: none"> <li>• Sustain (+ air to crossfade)</li> <li>• Staccato (+ Air Accents)</li> <li>• Internal Air Sustain</li> </ul> <p>SPECIAL FEATURES:</p> <ul style="list-style-type: none"> <li>• Crossfade between normal and air sound</li> <li>• Crossfade between embrochure position</li> <li>• Tailored Dynamic FX's</li> </ul>
<b>SINGLE INSTRUMENTS</b>	<p>MAXIMUM FLEXIBILITY, STREAMLINE GUI, TAILORED FX'S</p> <p>ARTICULATIONS INCLUDED:</p> <ul style="list-style-type: none"> <li>• Internal Air Sustain</li> <li>• Jet Whistle (internal air "short")</li> <li>• Slap tongue</li> <li>• Internal Slap tongue</li> <li>• Tongue Ram</li> <li>• Key Clicks open</li> <li>• Key Clicks closed</li> <li>• Whistle Tones</li> <li>• Multiphonics</li> </ul>



**SPECIAL PACK**

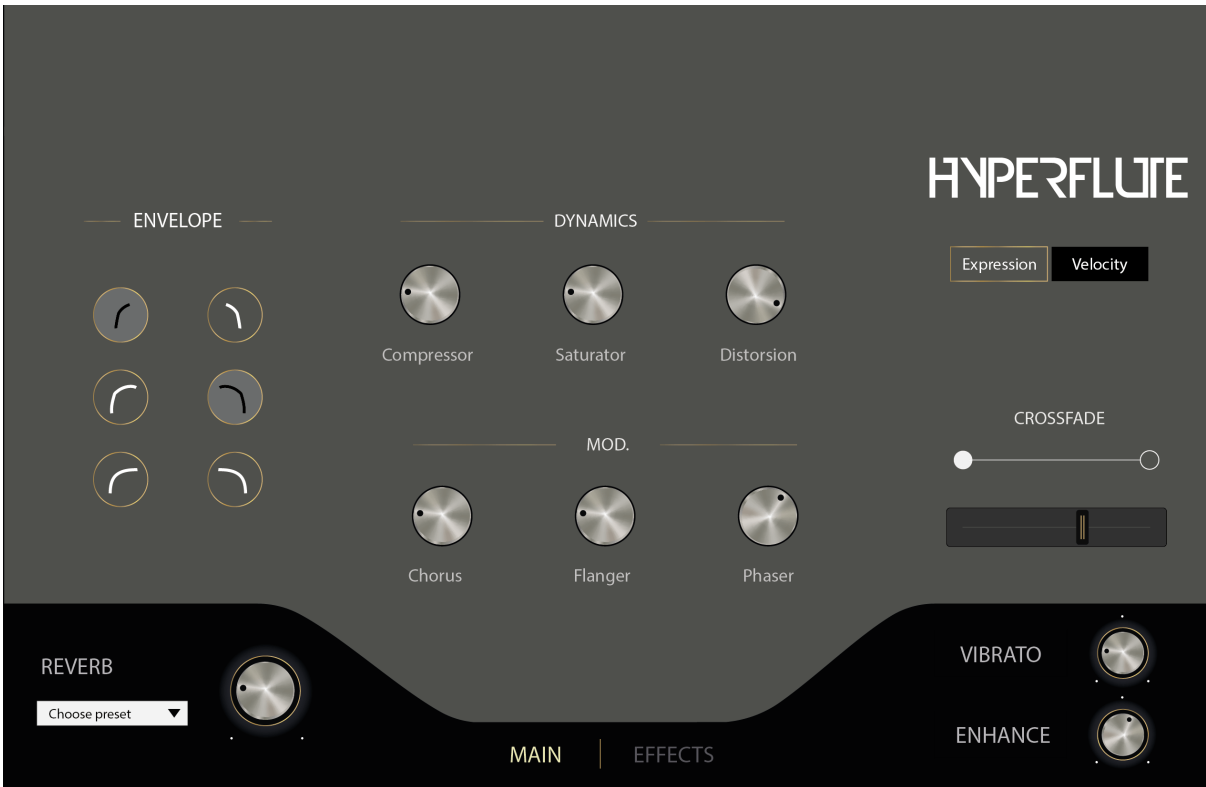
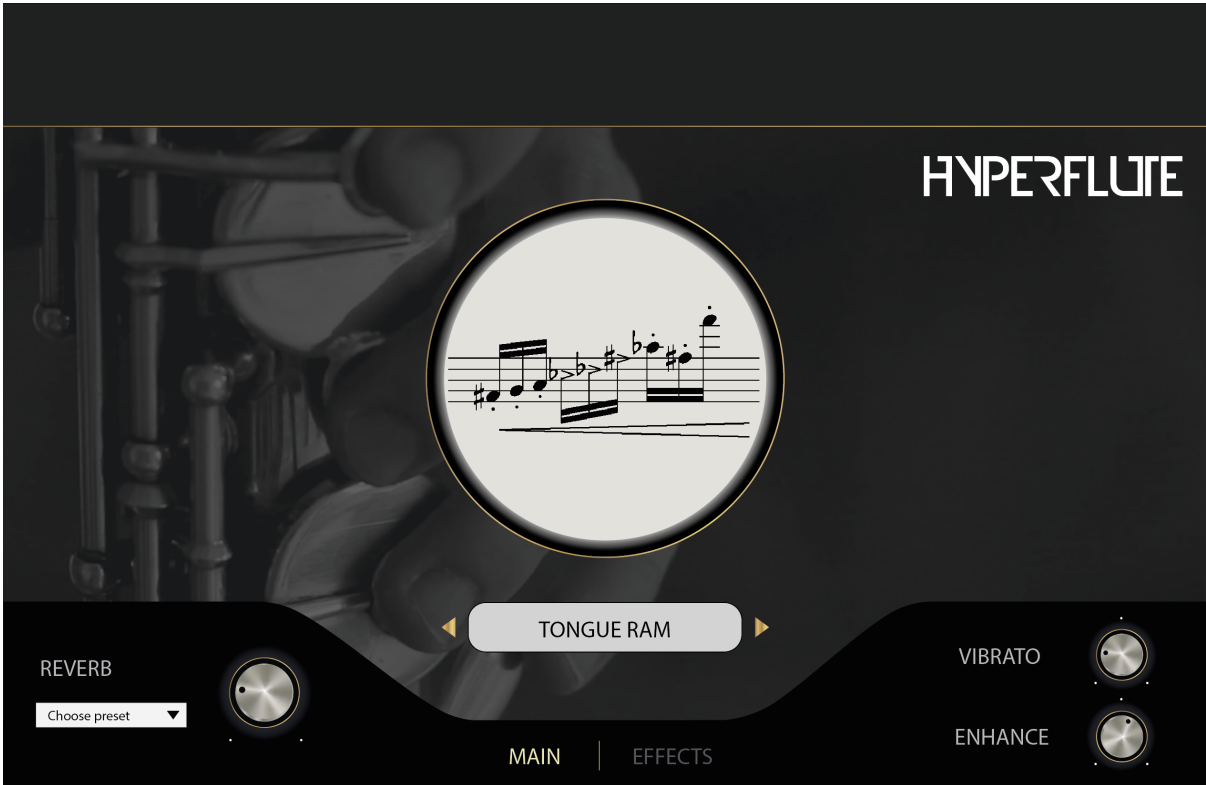
EXTENDED TECHNIQUES ON DOUBLE BASS FLUTE IN C

ARTICULATIONS INCLUDED:

- Tongue Ram (over the whole spectrum)
- Internal growl
- Harmonic Glissando
- Key Clicks closed (over the whole spectrum)

# INSTRUMENT GUI

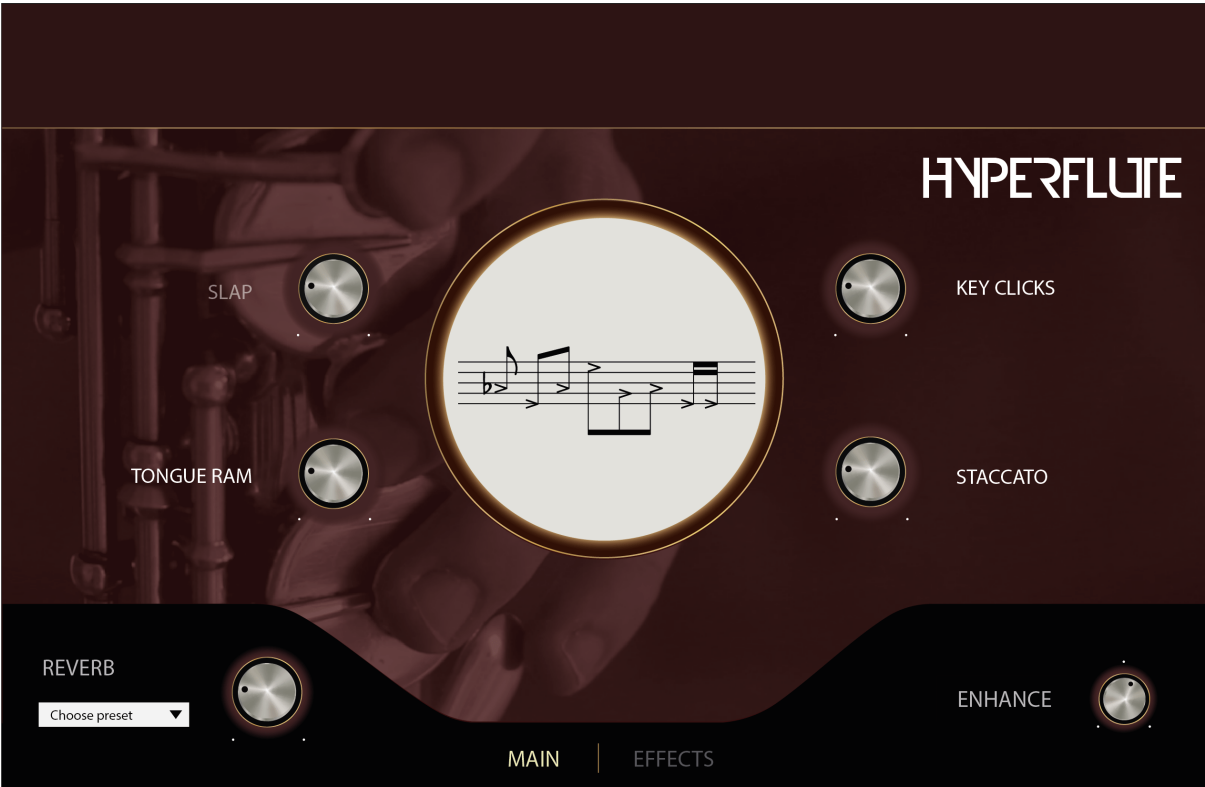
- Hyperflute Complete



- The image shows the Hyperflute software interface. At the top right, the word "HYPERFLUTE" is written in a white, stylized font. In the center, there is a circular window with a black border containing a musical staff with notes and accidentals. Below this window is a horizontal slider with "SUST." on the left and "STACC." on the right. At the bottom left, there is a "REVERB" section with a knob and a "Choose preset" dropdown menu. At the bottom right, there are two knobs labeled "VIBRATO" and "ENHANCE". At the very bottom center, there is a navigation bar with "MAIN" and "EFFECTS" tabs, with "EFFECTS" being the active tab. The background of the interface is dark with a faint, artistic image of a flute player.



- Hyperflute Percussion



# AUDIO SPECS AND COMPATIBILITY

- KONTAKT 6.3.2 or above
- All samples are recorded at 44.1kHz, 24-bit and exported as .WAV files
- .NKI and .NKS files available
- Loop points for Hyperflute Sounds were set using Wavelab
- Noise Cancelling using Adobe Audition
- Mastering: iZotope Ozone Element 9

Min. System Requirements:

Windows 10 (latest Service Pack, 64-bit, Intel Core i5 or equivalent CPU, 4GB RAM (6 GB recommended)

macOS 10.12, 10.13, 10.14, 10.15 (latest update), Intel Core i5, 4 GB RAM (6GB recommended)

# DEVELOPMENT TEAM

**Alessandro Baticci**; recording, GUI, UX

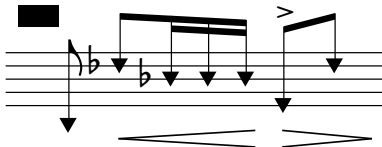
**Theodore Chatzilamprou**; scripting

**Elan Hickler**; audio editing

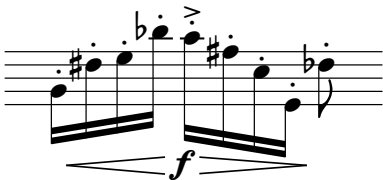
**Sam James**; notation examples

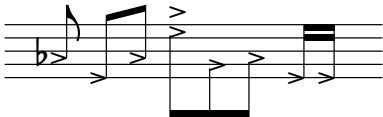


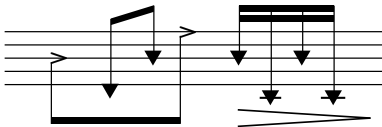


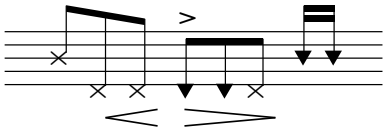




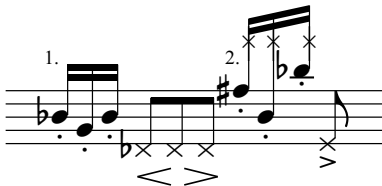




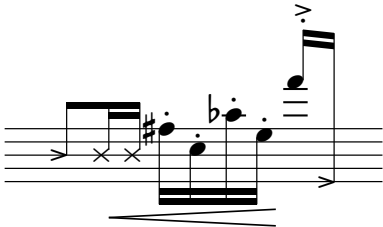






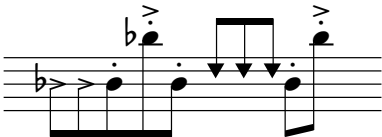


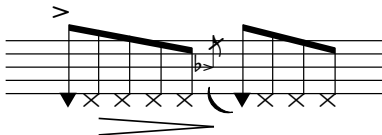




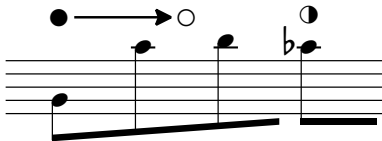












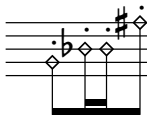
1. 2.

The image displays two musical variations, labeled 1. and 2., on a three-staff system. Variation 1 features a melodic line on the top staff with a half note, a quarter note, and a half note, all beamed together. An arrow points from a half note on the middle staff to a half note on the bottom staff. Variation 2 features a melodic line on the top staff with a half note, a quarter note, and a half note, all beamed together. The middle staff has a half note, a quarter note, and a half note, all beamed together. The bottom staff has a half note, a quarter note, and a half note, all beamed together. The notation includes various symbols such as #, b, and >.

[CH][CH]

*f*

1.



2.

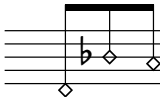






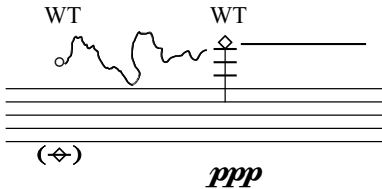


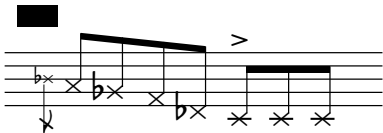
1.



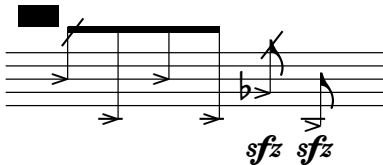
2.

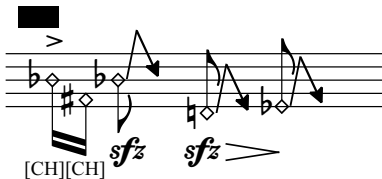




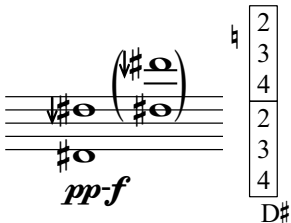








# PICCOLO MULTIPHONICS



Musical notation for Piccolo Multiphonics. The notation consists of two staves. The upper staff has a whole note with a sharp sign (#) and a downward-pointing arrow (v) on the first ledger line, and a whole note with a sharp sign (#) and a downward-pointing arrow (v) on the second line. The lower staff has a whole note with a sharp sign (#) on the first ledger line. The dynamic marking *pp-f* is written below the lower staff. To the right of the notation is a vertical box containing the numbers 2, 3, 4, 2, 3, 4, with a horizontal line between the first and second groups of numbers. Below the box is the text D#.

2
3
4
2
3
4

D#

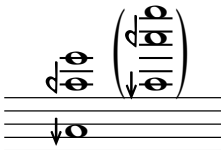
Musical notation on a grand staff (treble and bass clefs). The treble staff contains a sharp sign (#) above the first line, followed by a downward arrow pointing to a sharp sign (#) on the second line, then a whole note chord consisting of a sharp sign (#) on the second line and a natural sign (♮) on the third line. This is followed by a large parenthesis containing a sharp sign (#) on the second line, a downward arrow pointing to a sharp sign (#) on the second line, and a natural sign (♮) on the third line. The bass staff contains a downward arrow pointing to a sharp sign (#) on the second line, followed by a whole note chord consisting of a sharp sign (#) on the second line and a natural sign (♮) on the third line. Below the staves is the dynamic marking *pp-ff*. To the right of the staves is a vertical list of numbers: 2, 3, 4, 2, 3, 4, enclosed in a box. To the right of the box is the text G#.

2
3
4
2
3
4

G#

*pp-ff*



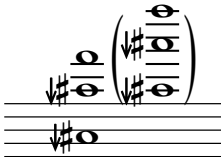


*mp-ff*

h

2	
3	
2	
3	

D#



*mf*

h

2
4
2

D#





*p-mf*

3
4
2

D#



*mp-mf*

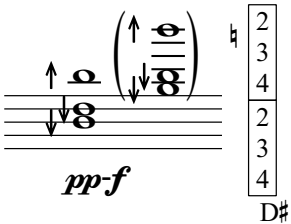
b

3

4

4

D#



$$\begin{pmatrix} \uparrow \# \\ \uparrow \# \\ \uparrow \# \end{pmatrix}$$

$$\begin{matrix} 2 \\ 3 \\ 4 \\ 4 \end{matrix}$$

$$D\#$$

$$mp$$

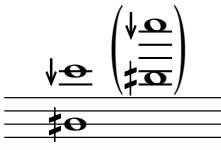
$b^{\#} \underline{\underline{8}} \left( b^{\#} \underline{\underline{8}} \right)$

$\mathfrak{h}$

3	G $\sharp$
4	
2	
3	
4	

$mp-f$





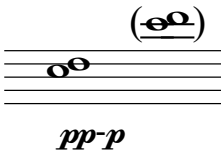
2
3
4
2
3

$$\uparrow \text{Bb} \quad \left( \begin{array}{c} \uparrow \text{Bb} \\ \downarrow \text{Bb} \end{array} \right) \quad \downarrow \text{Bb}$$

*mp*

3
2

D#



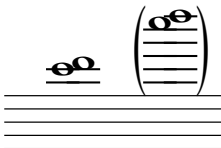
3
4
2
3
4

$\text{F}\sharp$   $\text{G}\sharp$   $\text{A}$   $\text{D}\sharp$

$p-mp$

3  
4  
2  
3

D#



*mp-mf*

2
3
4
2
3
4

$\# \underline{\underline{\mathbf{O}}}$   
 $\mathbf{O}$   
***p-f***

$\left( \begin{array}{c} \# \mathbf{\Theta} \\ \text{---} \\ \mathbf{\Theta} \\ \text{---} \\ \text{---} \end{array} \right)$

$\mathbf{b}$

2
3
4
3

G#

A

D#

$\text{p-ff}$

B

2
3

D#

$\text{#}\underline{\underline{\text{O}}}$ 
 $\left( \begin{array}{c} \text{#}\text{O} \\ \text{#}\text{O} \end{array} \right)$

$\text{#}\text{O}$

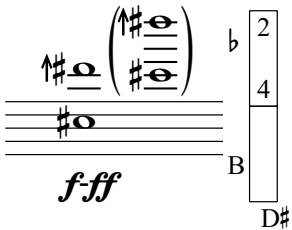
$mp-ff$

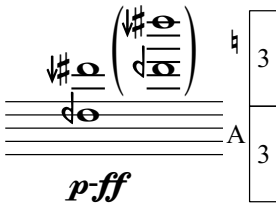
A

3  
4

D#







$\text{pp-ff}$

B

D#

$\text{mf-ff}$

A 3  
 B 3

Musical notation on a five-line staff:
 

- Top line:  $\uparrow \# \underline{\underline{\mathbf{O}}}$  (with a slur over the  $\mathbf{O}$ )
- Second line:  $\# \mathbf{O}$  (with a slur over the  $\mathbf{O}$ )
- Third line:  $\uparrow \# \underline{\underline{\mathbf{O}}}$  (with a slur over the  $\mathbf{O}$ )
- Fourth line:  $\# \underline{\underline{\mathbf{O}}}$  (with a slur over the  $\mathbf{O}$ )
- Fifth line:  $\left( \begin{array}{c} \uparrow \# \underline{\underline{\mathbf{O}}} \\ \# \underline{\underline{\mathbf{O}}} \end{array} \right)$  (with a slur over the  $\mathbf{O}$  in the top part of the parentheses)

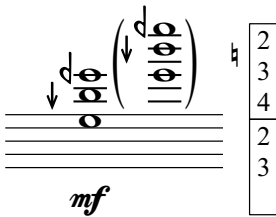
Dynamics:  $pp$ - $ff$

Fingering diagram (vertical box):
 

- Top section (labeled **A**): 2, 3, 4
- Bottom section (labeled **B**): empty box

Key signature:  $\sharp$  (F#)

Notes:  $G\sharp$  (next to the top section),  $D\sharp$  (below the bottom section)



Musical notation on a five-line staff:
 

- Line 5:  $\uparrow \#$  (up-bow, sharp)
- Line 4:  $\uparrow$  (up-bow)
- Line 3:  $\ominus$  (down-bow)
- Line 2:  $\ominus$  (down-bow)
- Line 1:  $\circ$  (natural)

 A large bracket groups the notes on lines 3, 4, and 5, with an  $\uparrow \#$  and an  $\uparrow$  placed inside the bracket.

To the right of the staff is a vertical scale diagram:
 

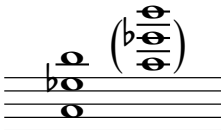
- A key signature symbol:  $\sharp$
- A vertical box containing the numbers: 3, 4, 2, 4 (from top to bottom).
- The letter **A** is positioned to the left of the box, aligned with the number 2.
- The note **D $\sharp$**  is positioned below the box.

Below the staff is the dynamic marking: *pp-mf*

Musical notation diagram showing a sequence of notes on a five-line staff. The notes are: a half note G4 (first line), a half note A4 (second line), a half note B4 (third line), a half note C5 (third space), and a half note D5 (fourth line). The notes are marked with a sharp sign (#) and a downward-pointing arrow. The dynamic range is indicated by *p-f* below the staff. To the right of the staff is a vertical scale indicator with two columns of numbers: the top column contains 2, 3, 4 and the bottom column contains 3, 4. A small 'A' is positioned between the two columns of numbers.



Musical notation on a four-line staff. The notation includes a series of notes and rests, with a large bracketed section containing a sharp sign and a downward arrow. The dynamics *mf-f* are indicated below the staff. To the right of the staff, a vertical box contains the numbers 2 and 3, with the letter B and the sharp sign D# positioned below it.

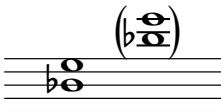


*pp-ff*

h

2
3
2
3
4

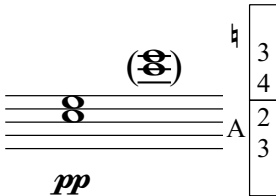
D#



b

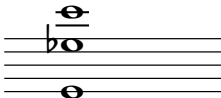
3
4
2
3

D#



The first measure of the song is marked *pp* (pianissimo). It features a treble clef and a key signature of one sharp (F#). The melody is written on a five-line staff. The first note is a half note G4 (G4), and the second note is a half note A4 (A4). The lyrics "The Rose Tree" are written below the staff. The measure is marked with a double bar line.

# FLUTE MULTIPHONICS



2
3
4
2
3
4

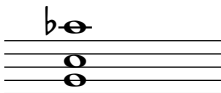
C



2
3
4

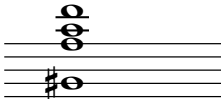
3
4

C



b	2
	<del>3</del>
	4
C	2
	3
	4





2  
3  
4

2  
3  
4

G#

C#



♭
 

2
3
4

 G#

---

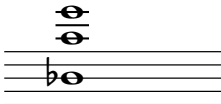
2  
 3  
 4

D#C



h

2
3
4
2
3
4



2  
X  
4 G#

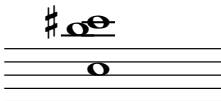
2  
3  
4  
D#



b

2
<i>A</i>
2
3
<i>A</i>

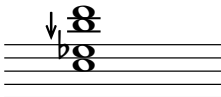
D#



*pp-ff*

2
3
4
2
<i>ℵ</i>
4

C#



h

3
<del>4</del>
2
3
4

C#

Musical notation: Treble clef with a flat (F) and a whole note on the first line; Bass clef with a sharp (F) and a whole note on the second line.

3	A
4	
2	A
4	



Diagram illustrating musical notation and a vertical sequence of numbers.

The musical notation consists of two staves. The upper staff features a flat symbol ( $b$ ) and a sharp symbol ( $\sharp$ ) positioned above a series of notes. The lower staff features a sharp symbol ( $\sharp$ ) positioned above a series of notes.

To the right of the musical notation is a vertical rectangular box containing the numbers 3, 4, 2, and 3, stacked vertically. Below the box is the label  $C\sharp$ .

A label  $A$  is positioned to the left of the vertical box, aligned with the number 2.

Musical notation on a five-line staff. The first line has a treble clef. The second line has a double bar line. The third line has a double bar line. The fourth line has a double bar line. The fifth line has a double bar line. The first line has a treble clef. The second line has a double bar line. The third line has a double bar line. The fourth line has a double bar line. The fifth line has a double bar line.

A vertical box containing the following elements from top to bottom:
 

- A treble clef.
- The number 3.
- The number 4.
- A horizontal line.
- The number 2.
- A crossed-out symbol (X).
- The number 4.

Below the box is the text **D#**.

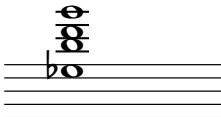
To the left of the box is the letter **B**.

The image displays musical notation on two staves. The upper staff contains three notes: a whole note with a flat (b) on the second line, a whole note with a sharp (#) on the first line, and a whole note on the first line. The lower staff contains a single whole note on the second line. To the right of the notes is a vertical box containing the numbers 2, 3, and 4, with a flat symbol (b) to the left of the number 4. Below the box is a large letter A, and below that is a flat symbol (b).

2
3
4

A

b



b

3

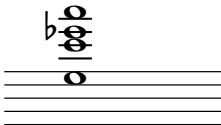
4

2

3

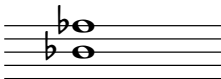
4

D#C



h

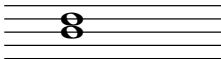
3
4
2
8
4



b

3
4
2
3
4

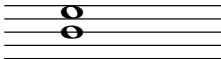
D#



h

3
4
2
8
4

C



h

3
4
2
3

D#

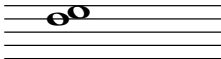


Diagram illustrating a musical staff with a sharp sign (#) and the number 8, and a vertical box containing the numbers 3, 4, 2, and 3, with the letter A positioned below the staff.

The diagram shows a musical staff with five horizontal lines. On the second line from the bottom, there is a sharp sign (#) followed by the number 8. To the right of the staff, there is a vertical box divided into two sections. The top section contains the numbers 3 and 4, and the bottom section contains the numbers 2 and 3. The letter A is positioned below the staff, to the left of the vertical box.

3
4
2
3

A



h

3

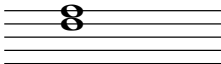
4

2

3

A

B



h

2
3
4
2

A  
B

Handwritten musical notation on a five-line staff. The notation includes a treble clef, a key signature of one flat (B-flat), and a dynamic marking of *mp* (mezzo-piano). The notation shows a half note on the second line (D) and a whole note on the second space (E). To the right of the staff is a vertical box containing a sequence of numbers: 2, 3, 4, 2, 3, 4.

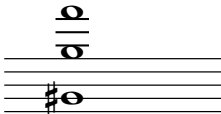
2
3
4
2
3
4



h

2
3
4
2
3
4

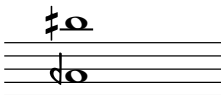
C B



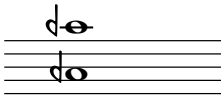
h

2
3
<i>4</i>
2
4

C#



♩	2
	<i>X</i>
	4
	2
	<i>X</i>



h

2	
<del>3</del>	
4	
<hr/>	
2	
3	
<del>4</del>	

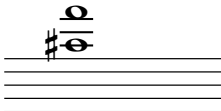
D#





h

2
<del>3</del>
<del>4</del>
2
3
4



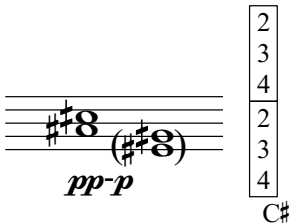
2

4

2

D#

# ALTO FLUTE MULTIPHONICS

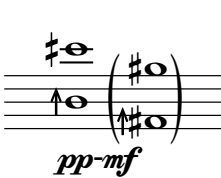


Musical notation for Alto Flute multiphonics. The notation consists of a five-line staff with a sharp sign (#) on the second line and the number 8 on the second space. Below the staff is the dynamic marking *pp-p*. To the right of the staff is a vertical box containing the numbers 2, 3, 4, 2, 3, 4. Below the box is the note C#.

*pp-p*

2
3
4
2
3
4

C#



h

3
4
2

D#



*mp-ff*

2
3
4
3
4

C#



h

3

4

3

4



h

2	
3	
4	
2	
4	

D#



*p-f*

h

3

4

D#



Musical notation on a five-line staff:
 

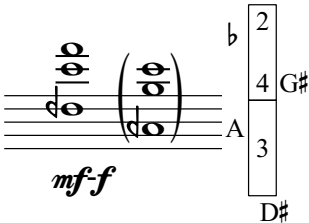
- Top line: A half note with a flat (D4), marked with a double underline.
- Second line: An eighth note with a sharp (F#4), marked with an upward-pointing arrow.
- Third line: A half note with a flat (D4), enclosed in large parentheses.
- Fourth line: An eighth note with a sharp (F#4), marked with an upward-pointing arrow.

 The dynamic marking *mf-f* is positioned below the staff.

To the right of the staff is a vertical scale diagram:
 

- A small treble clef is positioned to the left of the scale.
- A vertical rectangle contains the numbers 2, 3, 4, 2, 4 from top to bottom.
- To the right of the rectangle is the label **G#**.
- The letter **A** is positioned to the left of the rectangle, between the two '2's.

Handwritten musical notation on a five-line staff. The notation includes a treble clef, a key signature of one flat (B-flat), and a dynamic marking of *mf-f*. The notes are organized into two groups: a first group with a quarter note on the second line (F) and a beamed eighth-note pair on the third and fourth lines (C and D), and a second group enclosed in parentheses with a quarter note on the second line (F) and a beamed eighth-note pair on the third and fourth lines (C and D). To the right of the staff, there is a vertical box containing the numbers 2, 4, and 3, with a flat symbol (b) to its left. Below the box is the letter A. To the right of the box, the notes G# and D# are written.



*mf-f*

b 2  
4 G#  
3  
D#

A

Musical notation on a five-line staff. The first measure contains a sharp sign (#) above a whole note on the top line. The second measure contains a sharp sign (#) above a whole note on the top line, enclosed in large parentheses. The third measure contains a whole note on the middle line. The fourth measure contains a whole note on the bottom line. The dynamic marking *pp-ff* is written below the staff.

To the right of the staff is a vertical bar with the following content:

2	
4	G#
2	
	C#

The letter 'A' is positioned to the left of the vertical bar, aligned with the middle line of the staff.

Diagram illustrating a musical notation system on a five-line staff, showing dynamic markings and fingering.

The notation includes:

- A sharp sign ( $\sharp$ ) above the first line.
- A sharp sign ( $\sharp$ ) above the second line.
- A sharp sign ( $\sharp$ ) above the third line.
- A sharp sign ( $\sharp$ ) above the fourth line.
- A sharp sign ( $\sharp$ ) above the fifth line.
- A sharp sign ( $\sharp$ ) above the first line.
- A sharp sign ( $\sharp$ ) above the second line.
- A sharp sign ( $\sharp$ ) above the third line.
- A sharp sign ( $\sharp$ ) above the fourth line.
- A sharp sign ( $\sharp$ ) above the fifth line.

The dynamic marking *pp-mp* is indicated below the staff.

The fingering is indicated by a vertical bar with the number 2 in the upper section and the letter A in the lower section.

The final note is marked with a sharp sign ( $\sharp$ ) and the letter D# below it.

$\downarrow b$   $\#$   $\#$

$\downarrow$   $\#$   $\#$

$mf-f$

3  
2

A

D#

$\downarrow$   $\underline{\text{F}\sharp_4}$   
 $\underline{\text{F}\sharp_3}$

$\left( \downarrow \underline{\text{F}\sharp_4} \right)$   
 $\left( \text{F}\sharp_3 \right)$

***p-ff***

B

2
2
4

A musical exercise on a five-line staff. The first measure contains an eighth note on the second line (F) with an upward bowing arrow, and a half note on the second space (G) with a downward bowing arrow. The second measure contains a half note on the second space (G) with a downward bowing arrow, and a half note on the second line (F) with a downward bowing arrow, both enclosed in parentheses. The dynamic marking *pp-mp* is centered below the staff. To the right of the staff, a vertical rectangle contains the numbers 3 and 4, with a horizontal line between them. To the left of the rectangle are the labels A and B. To the right of the rectangle are the labels G# and D#.

*pp-mp*

A B

3 4 G#

D#



*mp*

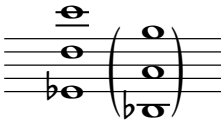


2
3
4
2
3

G#

D#





h

2
3
4
2
3
4

C

Musical notation showing a 4-part setting of a C major triad (C-E-G) on a four-line staff. The notes are: C (bottom line, sharp), E (second line, sharp), G (third line, sharp), and C (top line, sharp). The notes are grouped by a large bracket.

2
3
4
3
4

C



h

2	
<del>3</del>	
4	
<hr/>	
2	
3	
4	

C



2	G#
3	
4	
2	C#
3	
4	



b	2	G#
	3	
	4	
	2	
	3	
	4	
D#C		



$b$

$\mathcal{Z}$
$\mathcal{X}$
$\mathcal{A}$
$\mathcal{Z}$
$3$
$4$



2	G#
X	
4	
2	
3	D#
4	



b

2
<i>A</i>
2
3
<i>A</i>

D#





2
3
4
2
2
4

C#



b

3
<del>4</del>
2
3
4

C#

Musical notation on a five-line staff. The first measure contains a sharp sign (#) above a double bar line, and a sharp sign (#) below the staff. The second measure contains a sharp sign (#) above a circle with a horizontal line through it, and a sharp sign (#) below the staff. The third measure contains a sharp sign (#) above a circle with a horizontal line through it, and a sharp sign (#) below the staff. To the right of the staff is a vertical box containing the numbers 3, 4, 2, and 4, with a sharp sign (#) to its left and the letter A below it.



♯

B

3
4
2
♯
4

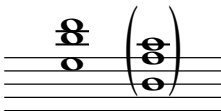
D#



h

3
4
2
3
4

D#C



h

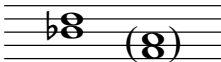
3
4
2
$\cancel{4}$
4



b

3
4
2
3
4

D#

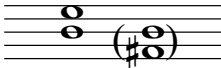


♭

3
4
2
♯
4

B





h

3
4
2
3

D#

Diagram illustrating a musical staff with a treble clef and a key signature of one sharp (F#).

The staff contains two notes, both labeled **#8**:

- The first note is on the second line (D).
- The second note is on the third line (E) and is enclosed in parentheses.

A vertical box to the right of the staff contains the numbers 3, 4, 2, and 3, separated by a horizontal line between 4 and 2. The letter **A** is positioned to the left of this box.

3
4
2
3

Diagram illustrating a musical staff with notes and a vertical box containing numbers.

The musical staff consists of five horizontal lines. The notes are as follows:

- Two eighth notes on the second line (G4).
- A pair of eighth notes on the third line (A4) enclosed in parentheses.

To the right of the staff is a vertical box containing the following numbers:

3
4
2
3

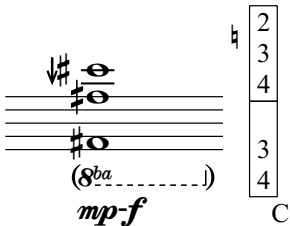
Labels A and B are positioned to the left of the vertical box, corresponding to the second and third rows respectively.

Diagram illustrating a musical staff with a treble clef and a key signature of one flat (B-flat). The staff contains two notes: a whole note G (labeled 8) and a half note G (labeled (8)).

Below the staff, the letters A and B are positioned. To the right of the staff, a vertical box contains the numbers 2, 3, 4, and 2, corresponding to the lines of the staff.

2
3
4
2

# BASS FLUTE MULTIPHONICS



Musical notation for Bass Flute Multiphonics. The notation consists of three staves. The top staff has a sharp sign (♯) with a downward arrow (↓) above it, followed by a whole note (♯) on the second line. The middle staff has a sharp sign (♯) followed by a whole note (♯) on the second line. The bottom staff has a sharp sign (♯) followed by a whole note (♯) on the second line. Below the bottom staff is the text  $(8^{ba} \text{-----})$ . The dynamic marking *mp-f* is written below the text. To the right of the notation is a vertical box containing the numbers 2, 3, and 4 in the top section, and 3 and 4 in the bottom section. A small 'b' symbol is to the left of the top section of the box. Below the box is the letter 'C'.

$(8^{ba} \text{-----})$

*mp-f*

2
3
4

3
4

C



(8<sup>ba</sup>-----|)

*pp-mp*

h

2
3
2
3

C#

Musical notation on a five-line staff:
 

- Top line: An eighth note with a sharp sign (#) and an upward-pointing arrow (↑) above it, followed by a whole note with a flat sign (b) below it.
- Second line: A whole note.
- Third line: A whole note.
- Fourth line: A whole note.
- Fifth line: A whole note.

Fingering diagram to the right of the staff:
 

- A vertical box divided into two sections.
- The top section contains the numbers 3 and 4 stacked vertically.
- The bottom section contains the number 3.

Additional markings:
 

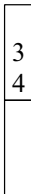
- A small 'b' symbol is positioned above the top section of the fingering box.
- Below the staff, the text  $(8^{ba} \text{-----} \text{—} \text{—})$  is written.
- Below the text, the dynamic marking *p-mf* is written.
- Below the fingering box, the text D# is written.



(8<sup>ba</sup>-----l)

***p-f***

h



G#

D#





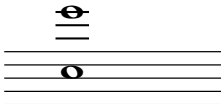
(8<sup>ba</sup>-----l)

*mf*

b

3
4
2
3

G#



(*8<sup>ba</sup>*-----l)

*mp-mf*

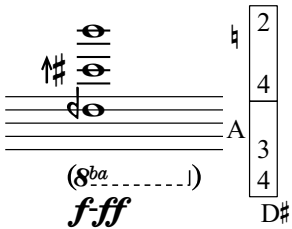
h

3

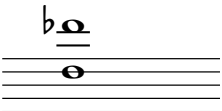
2

3

D#



Musical notation diagram showing a staff with a flat (b) and a whole note (O). A downward arrow points to the note. The dynamic marking *pp-ff* is indicated below the staff. To the right, a vertical box contains the numbers 2 and 3, and the label D# is positioned below it.



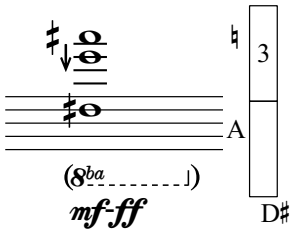
(8<sup>ba</sup>-----l)  
*pp-mf*

A
 

2
2
3

Musical notation on a five-line staff showing two eighth notes on the second line. Below the staff is the dynamic marking *p-mp*. A bracket labeled  $(8^{ba} \text{-----} |)$  spans the notes. To the right, a vertical box contains the fingering sequence: 3, 4, 2, 3. Above the box is a treble clef, and below it is the label B. Below the box is the label D#.









(8<sup>ba</sup>-----l)

*pp-p*



3
4
2
3
4

D#C

$(8^{ba}-----)$   
*mp-ff*

2
4
3
4

B C

8

#

(8<sup>ba</sup>-----l)

*mp-mf*

b

4

B

D#

Musical score for a piano piece. The score is written for a double bass (labeled **B**) and a piano (labeled **A**). The piano part is in treble clef with a key signature of one sharp (F#). The double bass part is in bass clef. The tempo is marked *mp-ff*. The score includes a first ending bracket labeled *(8<sup>ba</sup>-----|)*. The piano part has a first ending bracket labeled **A** and a second ending bracket labeled **B**. The double bass part has a first ending bracket labeled **2** and a second ending bracket labeled **4**.

Diagram illustrating musical notation and fingerings:

On the left, two staves are shown. The top staff contains a sharp sign (#) and a whole note (O) with a double underline. The bottom staff contains a sharp sign (#) and a whole note (O). Below the staves, the text  $(8^{ba} \text{-----} |)$  and the dynamic marking  $mp\text{-}ff$  are present.

On the right, a vertical box contains the numbers 2, 4, and 3, representing fingerings. To the left of the box is a flat sign (b). To the right of the box are the notes G# and D#. The letters A and B are positioned to the left of the box, corresponding to the 4 and 3 fingerings respectively.



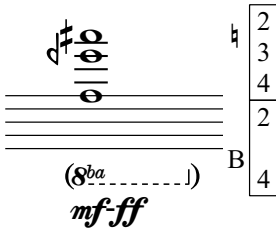
( $8^{ba}$ -----)

*pp-mf*

h

2
3
4
2
3

C#



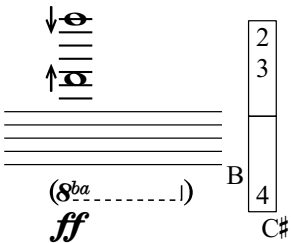


(8<sup>ba</sup>-----l)

*mf*

2	G#
3	
4	
2	
4	





# CONTRABASS FLUTE IN G MULTIPHONICS

The musical notation is written on a four-line staff. It features several notes with fingerings indicated by arrows and numbers. A dynamic marking *mp-mf* is present. A bracketed section contains notes with fingerings. To the right, a vertical box contains the numbers 2, 3, 4, 2, 3, 4, with a G# symbol next to it.

*mp-mf*  $8^{ba}$  |

2
3
4
2
3
4

G#

Musical notation on a grand staff (treble and bass clefs). The notation includes several notes with stems and beams, some marked with a downward arrow. A large bracket groups a section of the notation. Below the staff, the dynamic markings *pp-ff* and *8<sup>ba</sup>* are present.

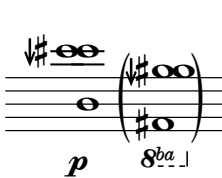
2
4
2
3



h

3
4
2
3

D#



h

3
4
2
4

C#



$\downarrow$   $\text{mf}$   $\left( \downarrow \right)$   $8^{ba}$

3  
 2  
 3  
 4

C#

Musical notation on a five-line staff:
 

- Top line: A half note with a sharp sign (#) and an upward-pointing arrow.
- Second line: A half note with a sharp sign (#) and an upward-pointing arrow.
- Third line: A half note with a sharp sign (#) and an upward-pointing arrow.
- Fourth line: A half note with a sharp sign (#) and an upward-pointing arrow.
- Fifth line: A half note with a sharp sign (#) and an upward-pointing arrow.

 A large parenthesis groups the notes on the second, third, and fourth lines.

Dynamics and articulation: *pp-mf*  $8^{ba}$  -|

A vertical box diagram to the right of the staff:
 

- Top section: A box containing the numbers 3 and 4.
- Bottom section: A box containing the number 4.

 The letter A is positioned to the left of the box, and D# is positioned below it.



Musical notation on a five-line staff:
 

- First measure: A half note on the 4th line (F#) with a downward arrow, and a half note on the 3rd line (D).
- Second measure: A half note on the 4th line (F#) with a downward arrow, and a half note on the 3rd line (D), enclosed in parentheses.

Chord diagram to the right of the staff:
 

- A key signature of one sharp (F#) is indicated.
- A vertical box contains the fingerings: 2, 3, 4 on the top three strings, and 2, 4 on the bottom two strings.
- The root note is labeled **G#**.
- The chord quality is indicated by the letter **A** below the staff.
- The overall chord is labeled **C** below the diagram.

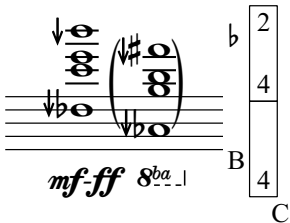
Dynamics and articulation:
 

- pp-ff* (pianissimo to fortissimo)
- 8<sup>ba</sup>* (8va) with a dashed line and a vertical line ending in a bar.

Musical notation on a five-line staff. The first measure contains a half note on the first line (F4) with a sharp sign (#) above it, and a quarter note on the second line (D4). The second measure contains a half note on the second line (D4) with a sharp sign (#) above it, and a quarter note on the first line (F4). A large parenthesis groups the two measures. A dashed arrow points down from the sharp sign in the first measure to the quarter note in the second measure.

To the right of the staff is a vertical box containing the numbers 3, 4, and 2. Below the box is the text  $D^\sharp$ .

Below the staff is the text  $mf-ff$   $8^{ba}$  with a small vertical line to its right.



Musical notation on a four-line staff. The first measure contains a sharp sign (#) with an upward-pointing arrow above it, followed by two eighth notes on the top line. The second measure is enclosed in large parentheses and contains a sharp sign (#) with an upward-pointing arrow above it, followed by two eighth notes. Below the staff, the dynamic marking *pp* is written under the first measure, and the marking *8<sup>ba</sup>* is written under the second measure. To the right of the staff is a vertical rectangular box divided into four sections, containing the numbers 3, 4, 2, and 3 from top to bottom. Above the box is a small sharp sign (#), and below the box is the letter C.

3
4
2
3

C

Musical notation on a five-line staff. The first measure contains a half note with a sharp sign (#) and a fermata, positioned on the top line. A downward-pointing arrow indicates a fingering of 2 on the second line. The second measure contains a half note with a sharp sign (#) and a fermata, positioned on the top line. A downward-pointing arrow indicates a fingering of 4 on the second line. The notes in the second measure are enclosed in large parentheses. Below the staff, the dynamic marking *mp* is written under the first measure, and the marking  $8^{ba}$  is written under the second measure. To the right of the staff, a key signature of one flat (B-flat) is indicated. Further right, a vertical box contains the numbers 2, 3, 4 in the top section and 2, 4 in the bottom section, separated by a horizontal line. Below this box, the letter A is written, and at the bottom right, the note D# is written.

# CONTRABASS FLUTE IN C MULTIPHONICS

$\downarrow \#$   $\uparrow \#$

$\downarrow \#$

(15<sup>ba</sup> ---- |)

*mp-mf*

$\begin{matrix} 2 \\ 3 \\ 4 \\ 2 \\ 3 \\ 4 \end{matrix}$  G#

$\downarrow \underline{\flat}$   
 $\underline{\flat}$

$\downarrow \sharp$

(15<sup>ba</sup>-----|)  
*pp-ff*

2
4
2
3



(15<sup>ba</sup>-----|)

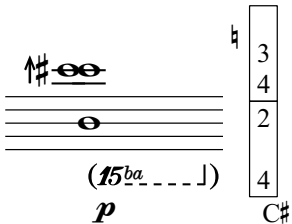
*pp-mf*

h

3
4
2
3
4

D#







(*15*<sup>*ba*</sup>-----|)

*p-f*

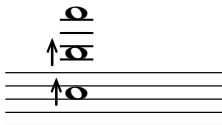
h

3

4

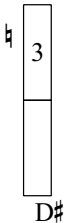
G#

D#



(15<sup>ba</sup>-----l)

*mp-f*



Musical notation for a piano exercise. The notation shows a sequence of notes on a five-line staff, with a treble clef. The notes are beamed together, indicating a rapid sequence. The notes are: a half note on the second line (D4), a half note on the first line (C4), a half note on the first line (C4), and a half note on the second line (D4). The notes are beamed together in pairs. Below the staff, the text  $(15^{ba}-----|)$  is written, followed by  $pp-ff$  in a large, bold, italicized font. To the right of the staff, there is a vertical box containing the numbers 2 and 3 in the top section, and 2 in the bottom section. To the left of this box is a small  $b$  symbol and the letter A. Below the box is the text  $D^\sharp$ .

*(15<sup>ba</sup>-----)*  
*pp-ff*

A

2  
3

D#

Musical notation for a guitar chord. The notation shows a treble clef with a key signature of one flat (B $\flat$ ). The chord is a B $\flat$ 7#9, with notes B $\flat$  (4th line), F# (3rd space), B $\flat$  (2nd space), and D# (1st space). The notes are marked with a circle containing a cross. The chord is labeled with a box containing the numbers 2, 3, 2, and B. The dynamics are marked as *pp-ff*. The fingering is indicated as (15<sup>ba</sup>-----l).

$d$   
 $\downarrow$   
 $d$   
 $d$

$(15^{ba} \text{---} \text{---} |)$   
 $mp-ff$

B

2
4
2
4

Musical notation on a five-line staff:
 

- Top line:  $\uparrow \# \underline{\underline{\mathbf{O}}}$
- Second line:  $\# \mathbf{O}$

Fingering diagram (vertical rectangle):
 

- Top:  $\flat$
- Top section: 3, 4
- Right side:  $\mathbf{G\#}$
- Bottom section: A, B
- Bottom:  $\mathbf{D\#}$

Additional notation:
 

- Below staff:  $(\mathbf{15^{ba}} \text{---} \text{---} \text{---} |)$
- Below staff:  $\mathbf{pp-mp}$



↑ Q  
 B D#

(15<sup>ba</sup>-----|)

*pp-mf*

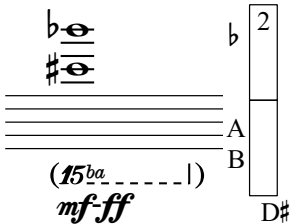
B

D#

Musical notation showing a 15va interval (15<sup>va</sup>) with dynamics *mf-ff*. The notation includes a treble clef with a sharp sign (#) and a bass clef with a natural sign (♮). The interval is indicated by a dashed line and a vertical bar.

Fingering chart (A/B):

2	G#
4	
2	B
3	



Musical score for a piano piece, featuring a treble clef, a key signature of one sharp (F#), and a 15va interval marked with a dashed line. The dynamics are *mf-f*. The right hand has a vertical box containing the numbers 3, 4, 2, 3, and a C# note below it.

