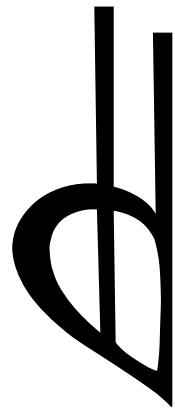


Thomas Nicholson

MOTTE
(2017)



NOTES

MOTTE (2017) is a chamber piece in Just Intonation that investigates the perceptual relationship between tuneable (natural) intervals and the various (enharmonic) paths they may take over an extended duration. It makes use of Marc Sabat's and Wolfgang von Schweinitz's *Helmholtz-Ellis JI Pitch Notation* to explicitly and practically notate exact natural horizontal and vertical interval relationships. In addition to these accidentals, cent deviations from equal temperament have been provided to help players realize these very particular shadings in intonation with the occasional help of an electronic tuner; all of the intervals are nevertheless *tuneable by ear* with careful attention to the particular colour and sound quality of each interval-ratio “type” (related to the prime numbers). Open strings are indicated by their string number (e.g., III) and natural harmonics are indicated by diamond note-heads (fingering position) along with their string number (fundamental) and harmonic number (e.g., 5°/III; namely the fifth harmonic of the third string).

As discerning listeners of a particular tradition, we are often preoccupied with a rhetorical study of harmony as having a “functional” meaning; stepping back for a moment and allowing oneself to get lost in the web of the sound itself, however, may allow for an emancipation of increasingly expressive and subtly shaded consonances and dissonances — a *free tonality*. With this in mind, the experience of listening need not be passive or of habit, in which listeners invariably make decisions about the “meaning” of what they are hearing, no matter how apparently familiar, based on preconceived philosophies of consonance, dissonance, and their interplay. Instead, it may be molded and reshaped in real-time, allowing its own perception and memory to be informed by and to evolve alongside events happening in the moment.

For more information on the *Extended Ellis JI Pitch Notation*, refer to Marc Sabat’s “Introduction and Legend” (in English and German) on the following pages.

The piano must be retuned to the following specifications with pure, un-stretched octaves (note that in the score and part, the piano is notated at “written pitch”):

Standard Tuning		Required Tuning		
Pitch Class (written)	e.g. ET-12 Freq. (Hz)	Harmonic Ratio (from A)	Cent Deviation from ET-12	e.g. Resultant Freq. (Hz)
A	220.000	1:1	0	220.000
A#/Bb	233.082	16:15	+12	234.667
B	246.942	13:12	-61	238.333
C	261.626	7:6	-33	256.667
C#/Db	277.183	5:4	-14	275.000
D	293.665	4:3	-2	293.333
D#/Eb	311.127	11:8	-49	302.500
E	329.628	3:2	+2	330.000
F	349.228	8:5	+14	352.000
F#/Gb	369.994	13:8	-59	357.500
G	391.995	7:4	-31	385.000
G#/Ab	415.305	11:6	-51	403.334

An informal introduction to the Helmholtz-Ellis Accidentals

by Marc Sabat

Berlin, April 2009

In learning to read HE accidentals, without having to rely on an electronic tuning device, it is important to be familiar with three things:

First, to keep in mind the natural tuning of intervals in a harmonic series, which deviate from the tempered system.

Second, to get to know how the accidentals refer to these overtone relationships.

Third, to observe that each written pitch may be related to many other pitches by natural intervals, and to tune it accordingly.

In most cases, this approach will allow the player to quickly and intuitively play just intonation (JI) pitches quite accurately. Any remaining adjustments can be made by ear, based on the specific sound of JI intervals.

Just intervals are readily learned because they are built up from simple, tuneable harmonic relationships. These are generally based on eliminating beating between common partials, finding common fundamentals and audible combination tones, and establishing a resonant, stable sonority which maximizes clarity: both of consonance and of dissonance.

A well-focussed JI sound is completely distinct from the irregular, fuzzy beating of tempered sounds. Just consonances, when marginally out of tune, beat slowly and sweetly and may be corrected with the most subtle adjustments of bowing or breath. Just dissonances produce a sharply pulsing regular rhythm and have very clear, distinct colors.

To become familiar with the notation and sounds of JI, the fundamental building blocks are prime number overtones 3, 5, 7, 11 and 13, each of which is associated with a specific pair of accidentals and a basic musical interval.

3 is associated with the signs flat, natural, sharp and refers to the series of untempered perfect fifths (Pythagorean intonation). Generally, A is taken as the tuning reference, and the central pitches C-G-D-A-E can be imagined as the normal tuning of the orchestral string instruments. The just C is rather lower than tempered tuning because of the pure fifths. The further this series is extended, the greater the deviation from tempered tuning: the flats are lower, the sharps higher.

5 is associated with arrows attached to the flat, natural, sharp signs and refers to the pure major third. These arrows correct the Pythagorean intervals by a Syntonic Comma, which is approximately 1/9 of a wholenote or 22 cents. So, for example, the note E-flat arrow-up is a just major third below G, and the note F-sharp arrow-down is a major third above D. In most music, flats are often raised by a comma and sharps are lowered. Because of the open string tuning, it is common to sometimes raise F and C (to match A and E) and to sometimes lower A and E (to match F and C). Corrections by one Syntonic Comma have been used throughout Western music history and are relatively familiar to the ear. However, traditionally these corrections have been hidden by players, for example in Meantone Temperament where fifths are mistuned narrow by $\frac{1}{4}$ comma so that the third C-E ends up sounding pure. More recently, the currently prevailing Equal Temperament has made us accustomed to beating thirds, so at first the pure intervals may seem unfamiliar. To play the arrows accurately, one must carefully learn the sound of the consonant major and minor thirds and sixths, and learn to articulate comma differences clearly.

7 is associated with a Tartini sign resembling the numeral. It corrects the Pythagorean intervals by a Septimal Comma, which is approximately 1/7 of a wholenote or 27 cents. When the Pythagorean minor third is lowered by this amount, it becomes a noticeably low third often heard in Blues music.

11 is associated with the quartertone signs (cross and backwards flat). The accidental is used to raise the perfect fourth by 53 cents, producing the exact tuning of the 11th partial in a harmonic series. The sound is most easily learned by playing one octave plus one fourth and raising it by a quartertone.

13 is associated with the thridtone signs (cross and backwards flat, each with 2 verticals). The accidental is used to lower the Pythagorean major sixth by 65 cents, producing the exact tuning of the 13th partial in a harmonic series. The sound is most easily learned as a neutral-sounding sixth, one-third of the way between the just minor and just major sixths (closer to minor than to major).

The following table presents the accidentals together with their associated ratios and cents deviations. To calculate the cents deviation from Equal Temperament of a specific written pitch (if desired) the following shortcut may be used:

1.) Find the cents deviation of the Pythagorean pitch, by calculating how many fifths it is away from A, multiplying by 2, and using a plus sign if it is on the sharp side and a minus if it is on the flat side.

2.) For each microtonal accidental, add or subtract its approximate cents value (as given above), keeping in mind whether the accidental is raising or lowering the pitch.

The resulting value should be a cents deviation within 1 or 2 cents accuracy, which is an acceptable starting point for fine-tuning by ear.

ACCIDENTALS

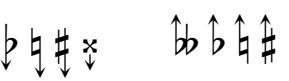
EXTENDED HELMHOLTZ-ELLIS JI PITCH NOTATION

for Just Intonation

designed by Marc Sabat and Wolfgang von Schweinitz

The exact intonation of each pitch may be written out by means of the following harmonically-defined signs:

 Pythagorean series of fifths – the open strings
(... c g d a e ...)

 lowers / raises by a syntonic comma
 $81:80 = \text{circa } 21.5 \text{ cents}$

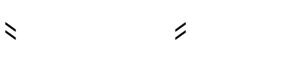
 lowers / raises by two syntonic commas
 $\text{circa } 43 \text{ cents}$

 lowers / raises by a septimal comma
 $64:63 = \text{circa } 27.3 \text{ cents}$

 lowers / raises by two septimal commas
 $\text{circa } 54.5 \text{ cents}$

 raises / lowers by an 11-limit undecimal quarter-tone
 $33:32 = \text{circa } 53.3 \text{ cents}$

 lowers / raises by a 13-limit tridecimal third-tone
 $27:26 = \text{circa } 65.3 \text{ cents}$

 lowers / raises by a 17-limit schisma
 $256:255 = \text{circa } 6.8 \text{ cents}$

 raises / lowers by a 19-limit schisma
 $513:512 = \text{circa } 3.4 \text{ cents}$

 raises / lowers by a 23-limit comma
 $736:729 = \text{circa } 16.5 \text{ cents}$

In addition to the harmonic definition of a pitch by means of its accidentals, it is also possible to indicate its absolute pitch-height as a cents-deviation from the respectively indicated chromatic pitch in the 12-tone system of Equal Temperament.

The attached arrows for alteration by a syntonic comma are transcriptions of the notation that Hermann von Helmholtz used in his book “Die Lehre von den Tonempfindungen als physiologische Grundlage für die Theorie der Musik” (1863). The annotated English translation “On the Sensations of Tone as a Physiological Basis for the Theory of Music” (1875/1885) is by Alexander J. Ellis, who refined the definition of pitch within the 12-tone system of Equal Temperament by introducing a division of the octave into 1200 cents. The sign for a septimal comma was devised by Giuseppe Tartini (1692-1770) – the composer, violinist and researcher who first studied the production of difference tones by means of double stops.

VORZEICHEN

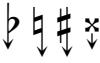
EXTENDED HELMHOLTZ-ELLIS JI PITCH NOTATION

für die natürliche Stimmung

konzipiert von Marc Sabat und Wolfgang von Schweinitz

Die Stimmung jedes Tons ist mit folgenden harmonisch definierten Vorzeichen ausnotiert:

bb b ♭ # ✕ Pythagoreische Quintenreihe der leeren Streicher-Saiten
(... c g d a e ...)

  Erniedrigung / Erhöhung um ein Syntonisches Terzkomma
 $81:80 = \text{circa } 21.5 \text{ cents}$

  Erniedrigung / Erhöhung um zwei Syntonische Terzkommas
circa 43 cents

  Erniedrigung / Erhöhung um ein Septimenkomma
 $64:63 = \text{circa } 27.3 \text{ cents}$

  Erniedrigung / Erhöhung um zwei Septimenkommas
circa 54.5 cents

  Erhöhung / Erniedrigung um den undezimalen Viertelton der 11er-Relation
 $33:32 = \text{circa } 53.3 \text{ cents}$

  Erniedrigung / Erhöhung um den tridezimalen Drittelson der 13er-Relation
 $27:26 = \text{circa } 65.3 \text{ cents}$

  Erniedrigung / Erhöhung um ein Siebzehner-Schisma
 $256:255 = \text{circa } 6.8 \text{ cents}$

  Erhöhung / Erniedrigung um ein Neunzehner-Schisma
 $513:512 = \text{circa } 3.4 \text{ cents}$

  Erhöhung / Erniedrigung um ein Dreißigstanner-Komma
 $736:729 = \text{circa } 16.5 \text{ cents}$

Zusätzlich zu der harmonischen Definition der Tonhöhe durch das Vorzeichen für jeden Ton ist auch der Cents-Wert der Abweichung der gewünschten Stimmung von der Tonhöhe des jeweils bezeichneten chromatischen Tons der gleichstufig temperierten Zwölfton-Skala angegeben.

Die attachierten Pfeile für die Alteration um ein Syntonisches Terzkomma sind eine bloße Transkription der Notation, die Hermann von Helmholtz in seinem Buch "Die Lehre von den Tonempfindungen als physiologische Grundlage für die Theorie der Musik" (1863) verwendet hat. Die kommentierte englische Übersetzung "On the Sensations of Tone as a Physiological Basis for the Theory of Music" (1875/1885) stammt von Alexander J. Ellis, der auch eine enorme Verfeinerung der Tonhöhendefinition innerhalb des Zwölftonsystems der gleichstufig temperierten Stimmung durch die Unterteilung der Oktave in 1200 Cents eingeführt hat. – Das Vorzeichen für die Alteration um ein Septimenkomma wurde von Giuseppe Tartini (1692-1770) erfunden, der als Komponist, Geiger und Wissenschaftler die durch Doppelgriffe erzeugten Differenztöne untersucht hat.

for Kimberely Farris-Manning

MOTTE

music for ensemble
in Just Intonation

Thomas Nicholson (2017)
duration ca. 40"

$\text{♩} = 52$

flute
(piccolo)

Flute (piccolo) part: Four measures of rests.

alto sax
(contrabass
clarinet)

Alto saxophone (contrabass clarinet) part: Four measures of rests.

bassoon
(contra-
bassoon)

Bassoon (contra-bassoon) part: Four measures of rests.

horn

Horn part: Four measures of rests.

tubular bells

Tubular bells part: Four measures of rests.

piano

Piano part: Four measures of rests.

ppp lontano
sempre con $\text{Ped.} \rightarrow$

$\text{♩} = 52$

senza vibrato, sempre poco s.t.
as if emulating a viol

III

violin

Violin part: Melodic line with pitch intervals indicated by downward arrows: -2, -20, -24, -42, -28, -24, -20.

p semplice

senza vibrato, sempre poco s.t.
as if emulating a viol

III

viola

Viola part: Melodic line with pitch intervals indicated by downward arrows: -4, -8, -26, -44, -40, -59, -22.

p semplice

2

A

9

fl

sax

bsn

hn

tb

pno

p

f

A

vln

vla

III

III

f

-8 -4 -22 -40 -59 -22 -4 -22 -26 -44

4

B

14

fl

sax

(1st time only)

bsn

(2^o)

p

-2

hn

(2nd time only)

p

-35

tb

pno

p

vln

vla

IV

III

2°/IV

-61 -46 -30 -32 +1 -3 -4 -18 -6

-30 -44 -32 -3 -4 -18 -6

18

C

fl

sax

bsn

hn

(1st time only)

tb

pno

C

vln

vla

IV

III

+10

-35

+2

-2

+16

-2

IV

p

-20

-24

-42

-28

+18

-4

-6

+18

-8

-26

-44

-40

IV

6

23

fl

sax

-59
ppp

bsn

-2
ppp

hn

-6
p

tb

pno

ppp

vln

vla

III +2 +16 +20 +2 III

-24 -20 -2 +14 +18 +4 -2 -20 -6
III +14 +18 +4 -25 -4 -8 -4
-59 -22 -4 -2 +18 +4 -25 -4 -8 -4
f

This page contains six staves of musical notation. The top four staves (Flute, Saxophone, Bassoon, Horn) begin at measure 23. The Flute has a dynamic of *ppp* and a pitch of +49. The Saxophone has a dynamic of *ppp* and a pitch of -59. The Bassoon has a dynamic of *ppp* and a pitch of -2. The Horn has a dynamic of *p* and a pitch of -6. The bottom two staves (Piano and Strings) begin later. The Piano staff begins at measure 23 with a dynamic of *ppp*. The String staves begin at measure 23 with dynamics of III, +2, +16, +20, +2, III, and III. Various pitch and dynamic markings are shown for the strings.

D

29

fl - | - | $\frac{3}{4}$ - | $\frac{4}{4}$ - | $\frac{5}{4}$ - | : $\frac{4}{4}$ - |

sax - | - | $\frac{3}{4}$ - | $\frac{4}{4}$ - | $\frac{5}{4}$ - | : $\frac{4}{4}$ - |
ppp

bsn - | - | $\frac{3}{4}$ - | $\frac{4}{4}$ - | $\frac{5}{4}$ - | : $\frac{4}{4}$ - |
ppp

hn - | - | $\frac{3}{4}$ - | $\frac{4}{4}$ - | $\frac{5}{4}$ - | : $\frac{4}{4}$ - | +16
ppp semper

tb - | - | $\frac{3}{4}$ - | $\frac{4}{4}$ - | $\frac{5}{4}$ - | : $\frac{4}{4}$ - |

pno - | - | $\frac{3}{4}$ - | $\frac{4}{4}$ - | $\frac{5}{4}$ - | : $\frac{4}{4}$ - |
ppp

D

vln -39 -24 -6 -18 -37 -4 | IV +12 III -2 -35 -20 -2 | III +2 +16 +16
p

vla -22 -8 -4 | III $\frac{3}{4}$ - | -18 -6 +18 -2 |

8

35

fl *ppp sempre*

sax +2 *ppp sempre*

bsn -2 *ppp sempre*

hn -33 -18

tb

pno *pp*

vln III
+16 gradually introduce bow pressure to III
+49 *ppp*
p f

vla -20 -2 3 5 33 -2 -18 6 -33 2 f

41 E 9

fl

sax

bsn

hn

tb

pno

ppp

-2

-6 3

ppp

→ Pd.

E

vln

vla

(sempre **f**)

p

+14 +29 +51 +47 (9/7 → 5/4)

-6 -2

+12 +45 +8 -3 -3 -4 -2

p

→ Pd.

10

47

F 4x **3x** **G**

fl

sax

bsn

hn

ttb

pno

S:

F 4x **3x** **G**

vln

vla

52

fl

sax

bsn

hn

+20

-18

-35

-2

-16

3

tb

pno

p

vln

2°/III
2°/IV

-4

2°/II
2°/III

I
II

vla

+12

-18

-35

-4

-2

-14

+2

I
II

This musical score page contains six staves of music. The top three staves (Flute, Saxophone, Bassoon) are mostly silent. The fourth staff (Horn) has a melodic line with various performance instructions: '+20' above the first note, '-18' below the second note, '-35' below the third note, '-2' below the fourth note, and '-16' below the fifth note. The fifth staff (Tuba) is mostly silent. The bottom two staves (Piano and Cello/Violin) have more active parts. The Piano staff features a dynamic marking 'p' and a melodic line with grace notes. The Cello/Violin staff has harmonic analysis above it: '2°/III' and '2°/IV' above the first measure, and '2°/II' and '2°/III' above the second measure. The Violin staff also includes dynamic markings '-4' and '+2'.

12

56

fl

H

+51

mp

-14

5

sax

bsn

hn

+2

mf

+14 +29 +82

tb

pno

mf

Ped.

vln

H

+51

mf

-14

I
(II)

+2

vla

mf

-16

This musical score page contains six staves of music for various instruments. The top staff is for flute (fl), followed by saxophone (sax), bassoon (bsn), horn (hn), tuba (tb), and piano (pno). The piano staff is divided into two systems. The first system for piano shows eighth-note chords with a dynamic marking of *mf*. The second system shows eighth-note chords with a dynamic marking of *Ped.*. The bottom staff is for violin (vln) and cello (vla). The violin part features a melodic line with eighth-note patterns and dynamic markings of *mf* and *mp*. The cello part provides harmonic support with sustained notes and eighth-note patterns. The score includes performance instructions such as **H**, measure numbers (+51, +2, -14, -16), and measure spans (5, 3). The instrumentation includes flute, saxophone, bassoon, horn, tuba, piano, violin, and cello.

60

fl

sax

bsn

hn

tb

pno

vln

vla

Measure 60: Flute (fl) plays a eighth-note followed by a sixteenth-note, with a fermata over the sixteenth-note. The key signature changes from A major (no sharps or flats) to E major (one sharp). The bassoon (bsn) and strings (vln, vla) play sustained notes.

Measure 61: Key signature changes back to A major (no sharps or flats). The flute (fl), saxophone (sax), bassoon (bsn), horn (hn), tuba (tb), piano (pno), violin (vln), and cello/bass (vla) all play sustained notes.

Measure 62: The piano (pno) and violin (vln) play eighth-note patterns. The piano dynamic is *mp*. The violin dynamic is *pp*.

Measure 63: The piano (pno) and violin (vln) continue their eighth-note patterns. The piano dynamic is *pp*. The violin dynamic is *pp*. The cello/bass (vla) plays sustained notes.

Measure 64: The piano (pno) and violin (vln) continue their eighth-note patterns. The piano dynamic is *pp*. The violin dynamic is *pp*. The cello/bass (vla) plays sustained notes.

14

I

D.S.

fl - | :2 - 4 - | - | :7 - | 6

sax - | :2 - 4 - | - | :7 - | 6

bsn - | :2 - 4 - | - | :7 - | 6
-4 pp +45 3

hn - | :2 - 4 - | - | :7 - | 6
-4 pp -37 -65 -4 +45 -20 poco

tb - | :2 - 4 - | - | :7 - | 6

pno - | :2 - 4 - | - | :7 - | 6

I

D.S.

vln - | :2 - 4 - | - | :7 - | 6
mf +45 s.p.
pp -4 (III) ppp

vla - | :2 - 4 - | - | :7 - | 6
3 mf -20 (III) IV s.p.
-6 pp ppp

J

68 fl :6 :4 :4

sax :6 :4 :4

bsn :6 :4 :4

hn :6 :4 :4 +12
f mf

tb :6 :4 :4

pno :6 :4 :4 f mp
3
Ped.

J poco s.t.
vln :6 :4 :4 -8 +8 -6 f +14 -19
poco s.t. (III)
vla :6 :4 :4 -8 f -20 +10 -2 3

16

71

fl

sax

bsn

hn

tb

pno

vln

vla

The musical score page 16 features six staves. The top three staves (flute, saxophone, bassoon) have rests throughout. The fourth staff (horn) has a sustained note from measure 1 to 2, followed by a melodic line with dynamics p , -6 , and -41 . The fifth staff (tuba) has rests. The sixth staff (piano) has rests. The bottom two staves (violin and cello) play sustained notes from measure 1 to 2, then switch to a new section starting at measure 3. The violin's section includes dynamics p , -2 , -4 , -8 , and -10 , and performance instructions II , III , and $4^{\circ}/III$. The cello's section includes dynamics mf , -8 , and -24 .

K

75

fl

sax

bsn

2

2

2

hn

-25

ppp

-53

2

tb

2

pno

2

2

vln

pp

f

K

m

s.t.
con sord. →
IV

-24

vla

pp

f

s.t.

-12

ppp

2

2

18

78

fl - 4 - - 6

sax - 4 - - 6

bsn - 2 4 - - 6

hn - 2 4 - - 6 *p* -29 -63

tb - 2 4 - - 6

pno { - 4 : - 4 : - 6 : - 6 : *p* - 6 : *p*

vln - 2 4 : - 4 : - 6 : - 6 : (III) 4°/II III
-53 *pp* -2

vla - 2 4 - - 6 : - 6 : I 4°/II
con sord. → I -4

82

fl

sax

bsn

hn +20 -18 -2 mute in

tb

pno

vln (norm.) 4°/II 3°/III → s.p.

vla (norm.) → s.p.

L

norm.
III
IV

+12 -4 **ppp** *sempre*

norm.
I
II

-2 **ppp** *sempre*

20

86

M 5x **accel.**

fl

sax

bsn

hn

tb

pno

(sustain through repeat)

pppp barely heard

M 5x **accel.**

vln

vla

s.p. subito

(norm.)

II
III

-18

poco s.t.
+6

(-6)
4°/IV

poco s.t.
+2

-12

N ♩ = 90

flute (fl.): Measures 91-92. Dynamics: **ppp**, **pppp**. Fingerings: -6, -49, -10, -22, -4, -57, -6, +8. Measure 93: -6.

saxophone (sax.): Measures 91-92. Dynamics: **ppp**. Fingerings: -22, -49, -6, -24, -14. Measure 93: -14.

bassoon (bsn.): Measures 91-92. Dynamics: **ppp**. Fingerings: -8, -20, -51, -6.

horn (hn.): Dynamics: **con sord. → ppp**. Fingerings: -22, -4, -57, -8, -20, -51.

tuba (tb.): Measures 91-92. Dynamics: **ppp**.

piano (pno.): Measures 91-92. Dynamics: **ppp**.

N ♩ = 90

violin (vln.): Measures 91-92. Dynamics: **ppp** (*artificial harm.*), **sfp pp**. Fingerings: -10, -8. Measure 93: **pizz. s.p.**, **pp**. Fingerings: -8. Measure 94: **arco (norm.) II III**, **ppp**. Fingerings: -2, -22. Measure 95: **(III)**.

cello (vla.): Measures 91-92. Dynamics: **ppp**. Fingerings: -6. Measure 93: **senza sord. → s.t.**, **2°/IV V**. Fingerings: -5. Measure 94: **s.p.**, **sfp pp**. Fingerings: -5.

95 flutter.

fl *sfffff*

+45

sax *ppp*

-35 -2 -6 -37 -65 -4 *ppp*

bsn -20 -2 -6 *ppp*

hn -3 -5 +45

-6 -37 -22 -4 *ppp*

tb

pno

vln II s.p. 9 5 (artificial harm.)

-6 (III) -2 pp

norm. -20 -2 -55 -16 -37 5 (artificial harm.)

vla -3 -5 -20 -37 -5 s.p. pp

0

23

99

fl

sax

bsn

hn

tb

pno

pizz. s.p.

arco sempre s.p.

pp

sfppp

sfppp

pp

3

Led. _____ | *Led.* _____

0

vln

vla

pizz. s.p.

mp

arco sempre s.p.

sfppp

III
s.p.
arco

7°/IV

5°/IV *5°/III*
3°/IV

5

-18 *-20* *-2*

poco s.t.
(II)

-18

-4

sfppp

24

103

fl +55 +16
 -2

sax +12 5 +24 +55
 -16 -4 -17 3

bsn +12 +24
 sfpp

hn +16
 3

tb

pno pp 5 3
 3 5 3

Ped.

vln norm.
 II III
 pp 5

+14

vla pizz. (norm.)
 +18 +25 +14
 -17 -46 -71
 poco 5

s.p.

fl 107 P +67 +2 5 +14 → flutter. → norm.

sax +16 flutter. *ppp <sf*

bsn +2 growl *ppp* <*sf*

hn

tb

pno 3 3 *Ped.*

vln s.p. +16 III play second time only → at the tip, s.t.
II (III) poco marcato
ppp <sf (beating!) +18 5 +16
vla 4°/IV 5 -8 *ppp* *ppp sempre*
play second time only → at the tip, s.t.
I (II) poco marcato
ppp sempre +2 5 +16 -17

110

fl

sax

ppp

-22 **p** *poco sf*

growl norm.

bsn

-6 5 -49 -39

ppp

hn

+14 +18 5 5

-8 -49 -24 -20 -4

ppp sempre

play second time only →
poco marcato

tb

pno

vln

(s.t.)

-16 -17 3

+16 +18 +14

-22-8 -4

(III) (IV)

-49 -22 -6 10

-24

s.p.

vla

+16 +18 +14

-16 5 -17 -2

at the frog, s.p.

IV

-6

at the tip

-4 -8 -6 -4

sfppp

Q

113 27

fl -22 ***ppp*** +45 -6 +45

sax play second time only poco marcato
ppp sempre 3 3 3

bsn -20 -14 -6 -18 -37 poco marcato
ppp sempre 3 4

hn -2 -8 5 5 -14 -37

tb -

pno play second time only → poco marcato
ppp sempre non legato 7 7 7
senza Ped. 7

vln (s.p.) s.t.
-8 -4 -22 -20 ***sfppp*** play both times →
(ppp) s.t.
at the frog (s.p.) play both times →
(ppp) 3°/III

vla -6 ***sfppp*** -2

28

116

fl

sax

bsn

hn

tb

pno

vln

vla

+45 3
-20

+22 3
-4
-8
-6
-18
-3

+12
-20

play both times →
-37 (ppp)

+45
-4
-6

play both times →
-6

-6

-

-

-

-

-

-

s.t. → poco s.p.
+45
s.t. → poco s.p.
s.t.

5x
 1: $\text{♩} = 45$
 2: $\text{♩} = 56.25$
 3: $\text{♩} = 67.5$
 4: $\text{♩} = 78.75$
 5: $\text{♩} = 90$

119

fl

sax

bsn

hn

tb

pno

vln

vla

play both times →
mf (beating!)

mute out

5x
 1: $\text{♩} = 45$
 2: $\text{♩} = 56.25$
 3: $\text{♩} = 67.5$
 4: $\text{♩} = 78.75$
 5: $\text{♩} = 90$

s.p.

(-4)

f

s.p.

sempre più s.t.
♩

f

R

30

122

fl ram
-8 +2
f

sax slap
+45°
f -20

bsn +45°
-35 f

senza sord. → cuivré

hn -22 -49 -6 -18 -2
f mp ff

tb

pno secco
(cluster)
f mf

3

ped.

R

vln s.t.
-6 -22
f

vla norm.
4°/IV
-3
ff

norm.
2°/IV
-4
p

5°/III
(2°/IV)
-18
ff

3°/III
-2
ff

2°/IV
-6

S $\text{d} = \text{d} = 60$

126 *flutter.*

fl *mf*

sax *ff*

bsn *ff*

hn *norm.*

-20 *sffppp*

1st time: *sempre ppp*
2nd time: *ppp, follow dynamics*

tb

pno *ff*

vln *mf*

vla *port.*
f

-37

1st time: *sempre ppp*
2nd time: *ppp, follow dynamics*

s.t.

32

130

T

fl

sax

bsn

hn

$\langle \rangle^5$

tb

pno

vln

vla

s.t.

3

2

1st time: sempre **ppp**

2nd time: **pp**, follow dynamics

s.p.

pp

T

IV

135

fl

sax

bsn

hn

p

tb

pno

vln

+45

3

s.t.

s.p.

-65

p

vla

s.p.

s.t.

s.p.

s.t.

s.p.

s.t.

p

This musical score page contains six staves of music. The top four staves (flute, saxophone, bassoon, and horn) are mostly silent. The fifth staff (tuba) is also mostly silent. The sixth staff (piano) has a dynamic marking 'p' under a sustained note. The bottom two staves (violin and cello/bassoon) have more complex markings. The violin staff has several slurs and grace notes. Above the violin staff, there are dynamic markings: '+45' with a bracket over three measures, 's.t.' (sforzando tenuto) with an arrow pointing to the third measure, 's.p.' (sforzando piano) with an arrow pointing to the fourth measure, and '-65' with a bracket over three measures. Below the violin staff, there is another 'p' dynamic. The cello/bassoon staff has slurs and grace notes, with dynamic markings 's.p.', 's.t.', 's.p.', 's.t.', 's.p.', and 's.t.' distributed across the measures. The page number '33' is in the top right corner, and the measure number '135' is at the top left.

34

140

U

fl

sax contrabass clarinet
1st time: pp <> mp

bsn

hn

mp mf f

tb

pno

U

vln

norm. → poco s.t. →

mp mf f

vla

norm. → poco s.t. →

mp mf f

145

fl

cbcl

contrabassoon

cbsn

hn

tb

pno

vln

vla

ff

f

ff

fff

-37 -2

+45

molto s.p.

> +45

-4 -2

molto s.p.

> +45

ff

fff

$\overbrace{\text{picc}}^5 = 150 \text{ (A)}$

$\overbrace{\text{cbcl}}^3 = 112.5 \text{ (B)}$

$\overbrace{\text{cbsn}}^5 = 150 \text{ (A)}$

$\overbrace{\text{hn}}^5$

$\overbrace{\text{tb}}^5$

$\overbrace{\text{pno}}^5$

$\overbrace{\text{vln}}^5$

$\overbrace{\text{vla}}^5$

ff sempre, non legato

to bassoon

$\text{picc} \quad 149 \quad :|: 5 | 8 | -6 | -61 | -18 | -6 | 5 | 8 | -61 | -18 | :| 8 |$

$\text{cbcl} \quad :|: 5 | 8 | - | - | - | - | 5 | 8 | - | - | :| 8 |$

$\text{cbsn} \quad :|: 5 | 8 | - | - | 2 | 4 | - | - | 5 | 8 | - | - | :| 8 |$

$\text{hn} \quad :|: 5 | 8 | - | - | 2 | 4 | - | - | 5 | 8 | - | - | :| 8 |$

$\text{tb} \quad :|: 5 | 8 | - | - | 2 | 4 | - | - | 5 | 8 | - | - | :| 8 |$

$\text{pno} \quad :|: 5 | 8 | - | - | 2 | 4 | - | - | 5 | 8 | - | - | :| 8 |$

$\text{vln} \quad :|: 5 | 8 | \gamma \gamma \gamma \gamma | -4 | f | 2 | 4 | 5 | 8 | \text{---} | 3 | \text{(artificial harm.)} | :| 8 |$

$\text{vla} \quad :|: 5 | 8 | - | - | 2 | 4 | \text{---} | 4^\circ/\text{III} | \text{---} | 4^\circ/\text{II} | 5^\circ/\text{III} | \text{---} | -6 | f | -20/-4 | :| 8 |$

picc = 150 (A) = 112.5 (B)

152

cbcl

cbsn

hn

tb

pno

vln

vla

Detailed description: This page from a musical score contains six staves of music. The top section (measures 1-4) features picc, cbcl, and cbsn. picc has a treble clef, 4/8 time, and a tempo of 152 BPM. It plays eighth-note pairs (A) at -6 and -61, followed by eighth-note pairs (B) at -18, -6, -18, and -61. cbcl and cbsn have bass clefs, 4/8 time, and play sustained notes. The middle section (measures 5-8) features hn and tb. hn has a treble clef, 4/8 time, and rests. tb has a bass clef, 4/8 time, and rests. The bottom section (measures 9-12) features pno and vln/vla. pno has a treble clef, 4/8 time, and a dynamic f. It plays eighth-note pairs (A) at -6 and -61, followed by eighth-note pairs (B) at -18, -6, -18, and -61. vln has a treble clef, 4/8 time, and dynamics p, f, p, f. It uses '(artificial harm.)' technique. vla has a bass clef, 4/8 time, and rests. Measure 12 concludes with a tremolo on the vln staff.

$\text{♩} = \text{♪}$

= 150 (A)

picc 155 | $\frac{5}{8}$ | -6 -61 -6 | +24 -6 -61 +24 | -61 -18 | :
 cbcl $\frac{5}{8}$ | - | - | :
 cbsn $\frac{5}{8}$ | - | - | :
 hn $\frac{5}{8}$ | - | - | :
 tb $\frac{5}{8}$ | - | - | :
 pno $\frac{5}{8}$ | - | - | :
 vln $\frac{5}{8}$ | *f* | (senza vib.) | :
 vla $\frac{5}{8}$ | $\frac{7}{8}$ | $\frac{4}{8}$ | :

$\text{♩} = \text{♪}$

= 112.5 (B)

picc | $\frac{2}{4}$ | -61 -18 | :
 cbcl $\frac{2}{4}$ | - | - | :
 cbsn $\frac{2}{4}$ | - | - | :
 hn $\frac{2}{4}$ | - | - | :
 tb $\frac{2}{4}$ | - | - | :
 pno $\frac{2}{4}$ | - | - | :
 vln $\frac{2}{4}$ | -6 | +24 | :
 vla $\frac{2}{4}$ | $\frac{7}{8}$ | $\frac{4}{8}$ | :

$\text{♩} = \text{♪}$

= 150 (A)

vln | $\frac{5}{8}$ | $\frac{5}{8}$ | :
vla | $\frac{5}{8}$ | $\frac{7}{8}$ | :

$\text{♩} = \text{♪}$

= 112.5 (B)

vln | $\frac{2}{4}$ | +24 | :
vla | $\frac{2}{4}$ | $\frac{7}{8}$ | :

(4°/II)
7°/III

-35

39

picc = 150 (A) = 112.5 (B) = 150 (A)

158 -6 -61 -18 -6 +24 -6 -37 -6 -37

cbcl :5 2 5 :5 5 :5

cbsn :5 2 5 :5 5 :5

hn :5 2 5 :5 5 :5

tb :5 2 5 :5 5 :5

pno :5 2 5 :5 5 :5

vln :5 2 5 :5 5 :5

vla :5 2 5 :5 5 :5

(artificial harm.)

-8/-10 *mf*

mf

f

4°/III
5°/IV

picc 162

cbcl

cbsn

hn

tb

pno

vln (*artificial harm.*)
+45/+43

vla

Detailed description: This is a page from a musical score. It contains eight staves, each with a different instrument: picc (piccolo), cbcl (double bassoon), cbsn (contrabassoon), hn (horn), tb (tuba), pno (piano), vln (violin), and vla (cello/bass). The tempo is marked as 162. The instrumentation is divided into two groups by vertical lines: picc, cbcl, cbsn on the left and hn, tb, pno on the right. The vln and vla staves are at the bottom. Various performance instructions are scattered across the page, such as '+6', '-6', '+24', and '-37'. The vln staff has a specific instruction: '(artificial harm.)' above the staff and '+45/+43' below it. Dynamics are indicated by 'p' (pianissimo) and 'f' (fortissimo). The vln staff also features two sets of oval-shaped slurs, likely indicating artificial harmonics.

picc 165

cbcl

cbsn

hn

tb

pno

vln

vla

*3°/I
II*

-8 (artificial harm.)

sfp mp

p

= 112.5 (B) *= 150 (A)*

+24

This musical score page contains eight staves, each representing a different instrument or section. The instruments are: picc (Piccolo), cbcl (Cimbasso), cbsn (Cimbasso Bassoon), hn (Horn), tb (Tuba), pno (Piano), vln (Violin), and vla (Double Bass). The score is set in common time (indicated by a '4' over a '4'). The tempo is marked as 165 BPM. There are several key changes and time signature changes throughout the page. Performance instructions include dynamic markings like 'sfp mp' and 'p', and specific techniques like 'artificial harm.' indicated by a circled '-8'. The page also features two groups of notes with different tempos: one group at = 112.5 (B) and another at = 150 (A). The piano staff shows a complex harmonic progression involving multiple voices and sustained notes. The double bass staff includes a technical note '3°/I II' above the staff.

$\text{♪} = \text{♩}$
= 150 (A)

$\text{♩} = \text{♩}$
= 112.5 (B)

168

picc

cbcl

cbsn

hn

tb

pno

$\text{♪} = \text{♩}$
= 150 (A)

$\text{♩} = \text{♩}$
= 112.5 (B)

vln

2°/III
2°/IV

sfz mp

(*artificial harm.*)

vla

sfz mp

43

171

picc = 150 (A) = 112.5 (B) = 150 (A)

cbcl : 5 : 8 : 2 : 4 : 5 : 8 : 5 : 8 :

cbsn : 5 : 8 : 2 : 4 : 5 : 8 : 5 : 8 :

hn : 5 : 8 : 2 : 4 : 5 : 8 : 5 : 8 :

tb : 5 : 8 : 2 : 4 : 5 : 8 : 5 : 8 :

pno : 5 : 8 : 2 : 4 : 5 : 8 : 5 : 8 :

vln : 5 : 8 : 2 : 4 : 5 : 8 : 5 : 8 :

vla : 5 : 8 : 2 : 4 : 5 : 8 : 5 : 8 :

(artificial harm.)

sfz mp

Detailed description: This is a page from a musical score. It features six staves of music for different instruments: picc, cbcl, cbsn, hn, tb, and pno. The picc staff has performance markings for slurs and grace notes. The other staves are mostly silent. The score includes tempo changes indicated by = 150 (A), = 112.5 (B), and +24. There are also dynamic markings like f and sfz mp. Harmonic analysis is shown above the vln staff with 4°/II and 5°/II. The vln staff also features an artificial harmonic technique. The page number 43 is in the top right corner.

44

$\text{= } 150 \text{ (A)}$ $\text{= } 112.5 \text{ (B)}$ $\text{= } 150 \text{ (A)}$ $\text{= } 112.5 \text{ (B)}$

picc 175

cbcl

cbsn

hn

tb

pno

$\text{= } 150 \text{ (A)}$ $\text{= } 112.5 \text{ (B)}$ $\text{= } 150 \text{ (A)}$ $\text{= } 112.5 \text{ (B)}$

(artificial harm.)

vln

vla

III: 5° 7°

$\frac{-20}{3}$ $\frac{-35}{3}$

f

$4^{\circ}/\text{I}$

-2

picc = 150 (A)

181

cbcl

cbsn

hn

tb

pno

vln

vla

picc: Measure 181 starts with a grace note followed by a eighth note. The tempo is = 150 (A). The rhythm includes -33, -61, +24, -33, +24, -37, -18, 33, and -4. The key signature changes from 5 to 4.

cbcl: Measures 181-182 are mostly silent.

cbsn: Measures 181-182 are mostly silent.

hn: Measures 181-182 are mostly silent.

tb: Measures 181-182 are mostly silent.

pno: Measures 181-182 feature sustained notes with grace notes above them. The key signature changes from 5 to 4.

vln: Measures 181-182 are mostly silent.

vla: Measures 181-182 are mostly silent.

46

$\overline{\overline{3}}$ = $\overline{\overline{3}}$
 = 112.5 (B) = 150 (A)

185 picc $\begin{array}{c} \text{G} \\ \text{F} \end{array}$:|:
 cbcl $\begin{array}{c} \text{G} \\ \text{F} \end{array}$:|:
 cbsn $\begin{array}{c} \text{G} \\ \text{F} \end{array}$:|:

hn $\begin{array}{c} \text{G} \\ \text{F} \end{array}$:|:
 :|:

tb $\begin{array}{c} \text{G} \\ \text{F} \end{array}$:|:
 :|:

pno $\begin{array}{c} \text{G} \\ \text{F} \end{array}$:|:
 :|:

$\overline{\overline{3}}$ = $\overline{\overline{3}}$
 = 112.5 (B) = 150 (A)

$\overline{\overline{3}}$ = $\overline{\overline{3}}$
 = 112.5 (B) = 150 (A)

vln $\begin{array}{c} \text{G} \\ \text{F} \end{array}$:|:
 sfzp
 :|:

vla $\begin{array}{c} \text{G} \\ \text{F} \end{array}$:|:
 sfzp
 :|:

picc

cbcl

cbsn

hn

tb

pno

vln

vla

The musical score page shows a staff for each instrument. The piano staff (pno) contains a dynamic section with the following markings: *pppp*, *p*, *mf*, *mp*, *f*, *pp*, *pf*, *p*, and *pp*. The piano staff also features grace notes and slurs. The other instruments (picc, cbcl, cbsn, hn, tb, vln, vla) have mostly blank staves with a few short dashes indicating minimal activity.

	picc						
	cbcl						
	cbsn						
	hn						
	tb						
pno		8	3	5	3		
		ppp	mf	mp	ff p	pppp	
	vln						
	vla						

50

206

picc -

cbcl -

cbsn -

hn -

tb -

pno *p* *pp* *ff* *f* *mf* *mp p* *pp ppp* *pppp*

vln -

vla -

3

f

8va]

This musical score page contains eight staves. The top four staves (picc, cbcl, cbsn, hn) are mostly silent. The fifth staff (tb) is also mostly silent. The sixth staff (pno) features a complex piano part with dynamic markings: *p*, *pp*, *ff*, *f*, *mf*, *mp p*, *pp ppp*, and *pppp*. Above the piano staff, there is a 3 measure repeat sign. The bottom two staves (vln and vla) are mostly silent. The piano part concludes with an eighth-note dynamic marking followed by an 8va bracket.

W

212

fl 5

cbsn 5

cbcl 5

 +49

 pp

cbsn 5

hn 5

 +51

 pp

tb 5

soft mallet

 ppp

Ped.

pno 5

pp

3

 ↙ *Ped.*

3

 ↗

 8va

ppp

W

vln 5

vla 5

 con sord. →

 -59 pp

52

X

52

216

X

flute

fl

cbcl

cbsn

Musical score for horn (hn) showing measures 1-2. The score consists of two staves. The first staff starts with a treble clef, a key signature of one sharp, and a common time signature. It contains six measures: measure 1 has eighth-note pairs (one pair with a grace note), measure 2 has a sixteenth-note cluster followed by a fermata over a whole note, measure 3 is a rest, measure 4 has a sixteenth-note cluster, measure 5 is a rest, and measure 6 has a sixteenth-note cluster. The second staff begins with a bass clef, a key signature of one sharp, and a common time signature. It contains three measures: measure 1 has a sixteenth-note cluster, measure 2 has a sixteenth-note cluster with a dynamic of $\frac{3}{33}$, and measure 3 has a sixteenth-note cluster with a dynamic of \textit{ppp} .

tb

ffff

p

ffff

p

ffff

p

ffff

p

Musical score for piano (pno) showing measures 5-8. The score consists of two staves. Measure 5 starts with a fermata over the first measure. Measure 6 begins with a dynamic *pp*. Measure 7 starts with a dynamic *p*. Measure 8 concludes with a dynamic *p*. Measure 9 begins with a dynamic *p*. Measure 10 ends with a dynamic *p*.

X

vln

vla

(norm.) → s.p.

6 8 8 8 5

6 8 8 8 5

(norm.)

mp

con sord. →

3 +12 -2 pppp

6 8 8 8 5

6 8 8 8 5

3 ppp

221

fl *p* +4 +16 -61 *pp*

cbcl 5 8 5 8

bsn 5 8 +2 +14 5 8 -2 *p* 3 *mp*

hn 5 8 5 8

tb 5 8 5 8 *ppp* *Ped.*

pno *pp* *ppp* *pppp* *pp* *mp* *Ped.*

vln 4°/III +16 +4 +49 -14 *p* -2

vla 5 8 +2 5 8 *pp* *—o*

54

226

(norm.) → flutter.

+2

mp

cbcl

bsn

hn

tb

pno

vln

vla

6
84
85
86
84
85
86
84
85
86
84
85
86
84
85
86
84
85
86
84
85
86
84
85
8

-33

+4

mf

-33

*pp**mp**p*

V

-33
mp

230 fl - $\frac{4}{8}$ - $\frac{5}{8}$ +2 **p** *poco fp* - $\frac{6}{8}$ - $\frac{5}{8}$

cbcl - $\frac{4}{8}$ - $\frac{5}{8}$ **p** *poco fp* - $\frac{6}{8}$ +49 **ppp** - $\frac{5}{8}$

bsn - $\frac{4}{8}$ - $\frac{5}{8}$ **p** *poco fp* - $\frac{6}{8}$ - $\frac{5}{8}$

hn - $\frac{4}{8}$ - $\frac{5}{8}$ **p** *poco fp* - $\frac{6}{8}$ - $\frac{5}{8}$

tb - $\frac{4}{8}$ - $\frac{5}{8}$ **p** *legg.* - $\frac{6}{8}$ - $\frac{5}{8}$

pno - $\frac{4}{8}$ **p** - $\frac{5}{8}$ *mp dim.* - $\frac{6}{8}$ **p** - $\frac{5}{8}$ **ppp**

vln - $\frac{4}{8}$ +2 $\frac{5}{8}$ *port.* - $\frac{6}{8}$ **p** *poco fp* 3°/II (III) - $\frac{6}{8}$ - $\frac{5}{8}$

vla - $\frac{4}{8}$ - $\frac{5}{8}$ **p** *poco fp* - $\frac{6}{8}$ - $\frac{5}{8}$

56

234 **Y**

fl | :5 :8 - | - | 6 :8 - | 4 :8 +12 9 :16
 cbcl | :5 :8 - | - | 6 :8 - | 4 :8 +49 9 :16
 bsn | :5 :8 - | - | 6 :8 - | 3 4 :8 +49 9 :16 pp

hn | :5 :8 :p +51 - | +14 6 :8 - | 4 :8 - | 9 :16
 tb | :5 :8 - | - | 6 :8 - | 4 :8 - | 9 :16

pno | :5 :8 :pp - | - | 6 :8 - | 4 :8 +12 9 :16
 vln | :5 :8 - | - | 6 :8 - | 4 :8 +47 9 :16
 vla | :5 :8 - | - | 6 :8 - | 4 :8 - | 9 :16

Y (artificial harm.) s.p.

238 (in 4 [♩+♩+♩+♩.]) Z

fl flutter.

cbcl +2 +49

bsn -2

hn growl
-33 ppp

tb

pno *pppp* *pppp* *pp* *pp* *pp* *pppp*

pp *pp* *pp* *pp*

(in 4 [♩+♩+♩+♩.]) Z

vln norm.

vla s.p. +47
(artificial harm.)

2°/I

pp

58 242 ([♩.+♩+♩])

fl flutter.

cbcl to alto sax

bsn

hn +4 +16 -14 -2 -33 -61 +49

p mp

tb pp ppp

pno pp pp pp pp

vln (norm) s.p.

vla +14 +51

AA

59

246

1

cbc1

bsn

b2

11

pno

vln

vla

58

1

6
8

58

1

6
8

5
9

10

6
9

5

1

6

5

1

6

p

(s.p.)

2°/T

三

norm
5°/IV

BB
 60 250
 fl. 6/8 - | 4/8 γ | 4/8 #p #p #p | 3/8 #p . port. +51
 -10 3 (= -39) p
 cbcl 6/8 - | 4/8 - | 3/8 - | 4/8 - | 4/8 -
 bsn 6/8 - | 4/8 - | 3/8 γ 9: #p +14 | 4/8 p pp
 hn 6/8 :. γ γ γ | 4/8 +4 | 4/8 - | 4/8 - | 4/8 -
 -61 p
 tb 6/8 - | 4/8 - | 3/8 - | 4/8 - | 4/8 -
 pno 6/8 - | 4/8 - | 3/8 - | 4/8 - | 4/8 -
 pp
 6/8 - | 4/8 - | 3/8 - | 4/8 - | 4/8 -
 Ped.
 vln 6/8 - | 4/8 - | 3/8 γ γ | 4/8 (s.p.) 2°/I
 pp
 vla 6/8 - | 4/8 - | 3/8 - | 4/8 - | 4/8 -

CC

254

61

fl

cbcl

bsn

hn mute out

tb

pno

CC

vln

vla

62

DD

258

1

cbcl

bsn

10

tb

pno

DD

vln

vla

EE (in 4 [♪+♪.+♪.+♪])

262 fl (in 3 [♪.+♪.+♪.]) 63

-31 *mp* +49 -12

sax alto sax +49 +12

-31 -59

bsn bsn +49 +14

-31

hn senza sord. → +33

-2 *mp*

tb

pno cantabile *mp*

Ped.

vln senza sord., norm.

+14 +2 -59 +51 +2

port. *mp*

vla senza sord., norm.

-2 +51 -14

port. *mp*

64

264

fl $\frac{4}{8}$ - $\frac{10}{16}$

sax $\frac{4}{8}$ - $\frac{10}{16}$

bsn $\frac{3}{8}$ - $\frac{10}{16}$

hn $\frac{4}{8}$ - $\frac{10}{16}$

tb $\frac{4}{8}$ p Ped. - $\frac{10}{16}$

pno $\frac{4}{8}$ p Ped. - $\frac{10}{16}$ sf

vln $\frac{4}{8}$ $\text{3}^{\circ}/\text{IV}$ V - slightly over-pressed $\frac{10}{16}$ mf

vla $\frac{3}{8}$ $+16$ $+12$ V - slightly over-pressed $\frac{10}{16}$ mf

65

(in 4 [♩♩.+♩.+♩.+♩.]) (in 6 [♩+♩.+♩+♩.+♩+♩])

FF

fl $\frac{10}{16}$ $\frac{7}{16}$ $\frac{5}{16}$

sax $\frac{10}{16}$ $\frac{7}{16}$ $\frac{5}{16}$

bsn $\frac{10}{16}$ $\frac{7}{16}$ $\frac{5}{16}$

hn $\frac{10}{16}$ $\frac{7}{16}$ $\frac{5}{16}$

tb $\frac{10}{16}$ $\frac{7}{16}$ $\frac{5}{16}$

pno $\frac{10}{16}$ $\frac{7}{16}$ $\frac{5}{16}$

vln $\frac{10}{16}$ $\frac{7}{16}$ $\frac{5}{16}$

vla $\frac{10}{16}$ $\frac{7}{16}$ $\frac{5}{16}$

Flute part (in 4 measure): $\text{F} \text{ A} \text{ C} \text{ D} \text{ E} \text{ F} \text{ G}$ (with grace notes)

Flute part (in 6 measure): $\text{F} \text{ A} \text{ C} \text{ D} \text{ E} \text{ F} \text{ G} \text{ A}$ (with grace notes)

Saxophone part (in 4 measure): $\text{C} \text{ E} \text{ G} \text{ A} \text{ B} \text{ C} \text{ D}$ (with grace notes)

Saxophone part (in 6 measure): $\text{C} \text{ E} \text{ G} \text{ A} \text{ B} \text{ C} \text{ D} \text{ E}$ (with grace notes)

Bassoon part (in 4 measure): $\text{D} \text{ F#} \text{ A} \text{ C} \text{ D} \text{ F#} \text{ A}$ (with grace notes)

Bassoon part (in 6 measure): $\text{D} \text{ F#} \text{ A} \text{ C} \text{ D} \text{ F#} \text{ A} \text{ C}$ (with grace notes)

Horn part (in 4 measure): $\text{E} \text{ G} \text{ B} \text{ D} \text{ E} \text{ G}$ (with grace notes)

Horn part (in 6 measure): $\text{E} \text{ G} \text{ B} \text{ D} \text{ E} \text{ G} \text{ A}$ (with grace notes)

Tuba part (in 4 measure): $\text{B} \text{ D} \text{ F#} \text{ A} \text{ C} \text{ D}$ (with grace notes)

Tuba part (in 6 measure): $\text{B} \text{ D} \text{ F#} \text{ A} \text{ C} \text{ D} \text{ E}$ (with grace notes)

Piano part (in 4 measure): $\text{G} \text{ B} \text{ D} \text{ F#} \text{ A} \text{ C}$ (with grace notes)

Piano part (in 6 measure): $\text{G} \text{ B} \text{ D} \text{ F#} \text{ A} \text{ C} \text{ E}$ (with grace notes)

Violin part (in 4 measure): $\text{A} \text{ C} \text{ E} \text{ G} \text{ B} \text{ D}$ (with grace notes)

Violin part (in 6 measure): $\text{A} \text{ C} \text{ E} \text{ G} \text{ B} \text{ D} \text{ F#}$ (with grace notes)

Cello part (in 4 measure): $\text{E} \text{ G} \text{ B} \text{ D} \text{ F#} \text{ A}$ (with grace notes)

Cello part (in 6 measure): $\text{E} \text{ G} \text{ B} \text{ D} \text{ F#} \text{ A} \text{ C}$ (with grace notes)

66

GG

267

fl

sax

bsn to contrabassoon

hn mute in

tb

pno { *mp* *p* }

vln

vla

271

HH

fl

sax +51 $\frac{5}{32}$ $\frac{3}{8}$

bsn $\frac{5}{32}$ $\frac{3}{8}$

hn

tb $\frac{5}{32}$ $\frac{3}{8}$ p $p\acute{e}d.$ mf

pno ppp p 8^{va} sf

vln norm. $\frac{3}{8}$

vla norm. $\frac{3}{8}$

68

274

II

fl

sax

bsn

hn

tb

pno

p

pp

Ped.

pp

II

vln

slightly over-pressed

mf

vla

slightly over-pressed

mf

norm.
3°/IV

mp

< ==

3 - 16

5

JJ

281

fl - - - 3 8 - - 4 8 - 5 16 - 4 8

sax - - - 3 8 - - 4 8 - 5 16 - 4 8

bsn - - - 3 8 - - 4 8 - 5 16 - 4 8

hn - - - 3 8 - - 4 8 - 5 16 - 4 8

tb - - - 3 8 - - 4 8 b - 5 16 h - 4 8

ppp
sempre con $\ddot{\text{E}}$. \rightarrow

pno { *pppp* simile *pp*
pp *pp* *pp* }

vln - - - 3 8 - - 4 8 h - 5 16 - 4 8

vla γ $\ddot{\text{E}}$ - - - 3 8 - - 4 8 - 5 16 - 4 8

molto s.p.
 \textcircled{V} *f*
pizz.
 \textcircled{O} \textcircled{V} \textcircled{O}
-31 *mf*

70 289

3x

fl - | $\frac{12}{8}$ - | $\frac{2}{8}$ - | $\frac{3}{8}$ - | - :| $\frac{2}{8}$ - | $\frac{3}{8}$ |

sax - | $\frac{12}{8}$ - | $\frac{2}{8}$ - | $\frac{3}{8}$ - | - :| $\frac{2}{8}$ - | $\frac{3}{8}$ |

bsn - | $\frac{12}{8}$ - | $\frac{2}{8}$ - | $\frac{3}{8}$ - | - :| $\frac{2}{8}$ - | $\frac{3}{8}$ |

hn - | $\frac{12}{8}$ - | $\frac{2}{8}$ - | $\frac{3}{8}$ - | - :| $\frac{2}{8}$ - | $\frac{3}{8}$ |

tb - | $\frac{12}{8} \# \infty$: | $\frac{2}{8}$ - | $\frac{3}{8} \flat$ - | - :| $\frac{2}{8}$ - | $\frac{3}{8}$ |

pp

pno - | $\frac{12}{8} \flat \infty$: | $\frac{2}{8} \flat$ - | $\frac{3}{8} \flat$ - | - :| $\frac{2}{8} \sharp \flat \infty$: | $\frac{3}{8} \sharp \flat$ - | $\frac{3}{8}$ |

pp

mp

vln - | $\frac{12}{8}$ - | $\frac{2}{8}$ - | $\frac{3}{8}$ - | - :| $\frac{2}{8}$ - | $\frac{3}{8}$ |

vla - | $\frac{12}{8}$ - | $\frac{2}{8}$ - | $\frac{3}{8}$ - | - :| $\frac{2}{8}$ - | $\frac{3}{8}$ |

3x

71

6x

295

fl

sax

bsn

hn

tb

pno

vln

vla

<img alt="Musical score page 71 showing measures 295 through 6x. The score includes parts for flute (fl), saxophone (sax), bassoon (bsn), horn (hn), tuba (tb), piano (pno), violin (vln), and cello/violoncello (vla). Measure 295 consists of six measures of rests. Measures 301-303 show rhythmic patterns of eighth and sixteenth notes. Measures 304-306 show eighth-note patterns. Measures 307-309 show eighth-note patterns. Measures 310-312 show eighth-note patterns. Measures 313-315 show eighth-note patterns. Measures 316-318 show eighth-note patterns. Measures 319-321 show eighth-note patterns. Measures 322-324 show eighth-note patterns. Measures 325-327 show eighth-note patterns. Measures 328-330 show eighth-note patterns. Measures 331-333 show eighth-note patterns. Measures 334-336 show eighth-note patterns. Measures 337-339 show eighth-note patterns. Measures 340-342 show eighth-note patterns. Measures 343-345 show eighth-note patterns. Measures 346-348 show eighth-note patterns. 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Measures 415-417 show eighth-note patterns. Measures 418-420 show eighth-note patterns. Measures 421-423 show eighth-note patterns. Measures 424-426 show eighth-note patterns. Measures 427-429 show eighth-note patterns. Measures 430-432 show eighth-note patterns. Measures 433-435 show eighth-note patterns. Measures 436-438 show eighth-note patterns. Measures 439-441 show eighth-note patterns. Measures 442-444 show eighth-note patterns. Measures 445-447 show eighth-note patterns. Measures 448-450 show eighth-note patterns. Measures 451-453 show eighth-note patterns. Measures 454-456 show eighth-note patterns. Measures 457-459 show eighth-note patterns. Measures 460-462 show eighth-note patterns. Measures 463-465 show eighth-note patterns. Measures 466-468 show eighth-note patterns. Measures 469-471 show eighth-note patterns. Measures 472-474 show eighth-note patterns. Measures 475-477 show eighth-note patterns. Measures 478-480 show eighth-note patterns. 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Measures 613-615 show eighth-note patterns. Measures 616-618 show eighth-note patterns. Measures 619-621 show eighth-note patterns. Measures 622-624 show eighth-note patterns. Measures 625-627 show eighth-note patterns. Measures 628-630 show eighth-note patterns. Measures 631-633 show eighth-note patterns. Measures 634-636 show eighth-note patterns. Measures 637-639 show eighth-note patterns. Measures 640-642 show eighth-note patterns. Measures 643-645 show eighth-note patterns. Measures 646-648 show eighth-note patterns. Measures 649-651 show eighth-note patterns. Measures 652-654 show eighth-note patterns. Measures 655-657 show eighth-note patterns. Measures 658-660 show eighth-note patterns. Measures 661-663 show eighth-note patterns. Measures 664-666 show eighth-note patterns. Measures 667-669 show eighth-note patterns. Measures 670-672 show eighth-note patterns. Measures 673-675 show eighth-note patterns. Measures 676-678 show eighth-note patterns. 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Measures 745-747 show eighth-note patterns. Measures 748-750 show eighth-note patterns. Measures 751-753 show eighth-note patterns. Measures 754-756 show eighth-note patterns. Measures 757-759 show eighth-note patterns. Measures 760-762 show eighth-note patterns. Measures 763-765 show eighth-note patterns. Measures 766-768 show eighth-note patterns. Measures 769-771 show eighth-note patterns. Measures 772-774 show eighth-note patterns. Measures 775-777 show eighth-note patterns. Measures 778-780 show eighth-note patterns. Measures 781-783 show eighth-note patterns. Measures 784-786 show eighth-note patterns. Measures 787-789 show eighth-note patterns. Measures 790-792 show eighth-note patterns. Measures 793-795 show eighth-note patterns. Measures 796-798 show eighth-note patterns. Measures 799-801 show eighth-note patterns. Measures 802-804 show eighth-note patterns. Measures 805-807 show eighth-note patterns. Measures 808-810 show eighth-note patterns. Measures 811-813 show eighth-note patterns. Measures 814-816 show eighth-note patterns. Measures 817-819 show eighth-note patterns. Measures 820-822 show eighth-note patterns. Measures 823-825 show eighth-note patterns. Measures 826-828 show eighth-note patterns. Measures 829-831 show eighth-note patterns. Measures 832-834 show eighth-note patterns. Measures 835-837 show eighth-note patterns. Measures 838-840 show eighth-note patterns. Measures 841-843 show eighth-note patterns. Measures 844-846 show eighth-note patterns. Measures 847-849 show eighth-note patterns. Measures 850-852 show eighth-note patterns. Measures 853-855 show eighth-note patterns. Measures 856-858 show eighth-note patterns. Measures 859-861 show eighth-note patterns. Measures 862-864 show eighth-note patterns. Measures 865-867 show eighth-note patterns. Measures 868-870 show eighth-note patterns. Measures 871-873 show eighth-note patterns. Measures 874-876 show eighth-note patterns. 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Measures 943-945 show eighth-note patterns. Measures 946-948 show eighth-note patterns. Measures 949-951 show eighth-note patterns. Measures 952-954 show eighth-note patterns. Measures 955-957 show eighth-note patterns. Measures 958-960 show eighth-note patterns. Measures 961-963 show eighth-note patterns. Measures 964-966 show eighth-note patterns. Measures 967-969 show eighth-note patterns. Measures 970-972 show eighth-note patterns. Measures 973-975 show eighth-note patterns. Measures 976-978 show eighth-note patterns. Measures 979-981 show eighth-note patterns. Measures 982-984 show eighth-note patterns. Measures 985-987 show eighth-note patterns. Measures 988-990 show eighth-note patterns. Measures 991-993 show eighth-note patterns. Measures 994-996 show eighth-note patterns. Measures 997-999 show eighth-note patterns.</p>

poco rall.

$\text{J} = 52$
5x

KK repeat ca. 25 sec.
growing level of swell
to *mf* over duration

repeat ca. 20 sec.
varying duration of rest
independently of the
other players

repeat ca. 15 sec.
gradually returning in
phase with conductor,
dimin. over duration

301 fl +4

sax -59

contrabassoon

cbsn

decresc. independently
of the other players
over duration

to bassoon

decresc. independently
of the other players
over duration

con sord. → +2

hn

decresc. independently
of the other players
over duration

tb

p disappearing
decresc. independently
of the other players

→ Ped . lift pedal slowly

pno

p disappearing
decresc. independently
of the other players

lift pedal slowly

poco rall.

$\text{J} = 52$
5x

KK repeat ca. 25 sec.
growing level of swell
to *mf* over duration

repeat ca. 20 sec.
varying duration of rest
independently of the
other players

repeat ca. 15 sec.
gradually returning in
phase with conductor,
dimin. over duration

vln con sord. → +51

vla con sord. → -31

V

* Note: this is *not* a typical "overtone chord": the violinist must take extra care to tune the C-natural as a 6/5 with the viola's A.

LL

73

305

fl

sax

cbsn

hn

tb

pno

*ppp lontano, al fine
sempre con Ped. al fine →*

LL

vln

vla

p semplice al fine

p semplice al fine

-2

-20

-24

-42

-28

-24

-20

-4

-8

-26

-44

-40

-59

-22

74

309

MM

fl

ppp lontano, al fine

sax

ppp lontano, al fine

bassoon

ppp lontano, al fine

hn

+16

ppp lontano, al fine

tb

pno

MM

vln

+2 +16 +20 +2

-2 -2 -2 -20

vla

+14 +18 +4 -25

$\frac{2}{4}$ $\frac{2}{4}$ $\frac{2}{4}$ $\frac{2}{4}$

NN

313

fl

sax

bsn

hn

tb

pno

NN

vln

vla

-8 -4 -22 -40 -59 -22 -4 -22 -26

76

317

fl

sax

bsn

hn

tb

pno

vln

vla

00

322

fl

sax

bsn

hn

+2

tb

pno

00

vln

vla

78

327

PP

fl - - - +49 - - -
sax - - - - - - -
bsn - - - - - - -

-59 -2 -6

hn - - - - - - -

-4 -

tb - - - - - - -

pno - - - - - - -

-2 - 2 - - - - -

PP

vln -24 -20 -2 +2 +16 +20 +2 -2 -20 -6
vla -59 -22 -4 +14 +18 +4 -25 -4 -8 -4

QQ

79

333

fl - | - | $\frac{3}{4}$ - | $\frac{4}{4}$ - | $\frac{5}{4}$ - | $\frac{4}{4}$ -

sax - | - | $\frac{3}{4}$ - | $\frac{4}{4}$ - | $\frac{5}{4}$ - | $\frac{4}{4}$ -
-4

bsn - | - | $\frac{3}{4}$ - | $\frac{4}{4}$ - | $\frac{5}{4}$ - | $\frac{4}{4}$ -

hn - | - | $\frac{3}{4}$ - | $\frac{4}{4}$ - | $\frac{5}{4}$ - | $\frac{4}{4}$ - | $\frac{16}{16}$

tb - | - | $\frac{3}{4}$ - | $\frac{4}{4}$ - | $\frac{5}{4}$ - | $\frac{4}{4}$ -

pno - | - | $\frac{3}{4}$ - | $\frac{4}{4}$ - | $\frac{5}{4}$ - | $\frac{4}{4}$ -

- | - | γ \sharp | $\frac{3}{4}$ \flat | $\frac{4}{4}$ \flat | $\frac{5}{4}$ \sharp | $\frac{4}{4}$ \sharp -

QQ

vln -39 | -24 | -6 | -18 | -37 | -4 | $\frac{3}{4}$ +12 | $\frac{4}{4}$ -35 | -2 | -20 | -2 | $\frac{5}{4}$ +2 | $\frac{4}{4}$ +16 | $\frac{4}{4}$ +16

vla -22 | -8 | -4 | - | $\frac{3}{4}$ | -18 | -6 | $\frac{5}{4}$ +18 | $\frac{4}{4}$ -2 | -

80

339

fl

+49 5 -4 -61

sax

+2

bsn

-2 3

hn

-33 -18 -33

tb

pno

vln

+16 3 -2 +49 5 -4 -16 +2 -16 -2

vla

-20 -2 3 5 -33 -2 -18

long...

81

RR

345

fl
sax
bsn
hn
tb
pno

-2 -4
-6 3 -4

→ Leo.

long...

RR

vln
vla

+14 +29 +51 +47
+12 +45 +8 -3 -3 -4 -2

(9/7 → 5/4)

-6

Fredericton, 07.2016
— Victoria, 03.2017
(Berlin, 11.2017)