Marc Sabat

Asking ocean

for solo string quartet
and 18 instruments

PLAINSOUND MUSIC EDITION

for Harry Partch
who opened a door and went outside

(1901-1974)

Asking ocean (2016)

for solo string quartet and 18 instruments

String Quartet (2 Violins, Viola, Violoncello)

Flute 1 (also Piccolo, Alto Flute, Bass Flute)
Flute 2 (also Alto Flute, Bass Flute)
Oboe (also Bass Oboe)
Clarinet 1 in Bb (also Bass Clarinet)
Clarinet 2 in Bb (also Bass Clarinet with low range to sounding B, written C#)
Alto Saxophone in Eb
Double Horn (score is written for a horn with lengthened 3rd valve and quartertone 4th valve)
Trumpet 1 in Bb (also Piccolo Trumpet in Bb)
Trumpet 2 in Bb (also 4-hole Natural Trumpet tuned to concert C+47c)
Tenorbass Trombone
5-valve F-Tuba
Percussion 1 (Glockenspiel, Vibraphone, Tuned objects — see scordatura pages)
Percussion 2 (Crotales, Marimba with 5 altered pitches — low range from Gb2, Tuned objects — see scordatura pages)
Chromatic Pedal Harp in a scordatura tuning
2 Manual Harpsichord in a scordatura tuning (5-octave range Gb1 to F6) (also Piano)
Violin in a scordatura tuning
Viola in a scordatura tuning
Violoncello in a scordatura tuning (also 7-string Bass Viola da Gamba in a scordatura tuning with double frets)

commissioned by Sonar Quartett for the musicians of the Ensemblekollektiv Berlin
made possible by a grant from the Ernst von Siemens Musikstiftung
premiere : Festival Ultraschall, Berlin, January 2017

About the music

Asking ocean (2016) is a work for solo string quartet and ensemble based on a previous work, *Euler Lattice Spirals Scenery* (2011). This string quartet was composed in Rome during a one-year residency at the Villa Massimo, and premiered by Sonar Quartett on 20 October 2011. The musical form follows from establishing and exploring microtonal variations of intonation, based upon an interlocking network of harmonically related pitches tuned in extended just intonation.

The work is divided in seven parts, played mostly without pause:

Prelude (intonation) – Pythagoras Drawing 1 – Harmonium for Claude Vivier – Interlude (intonation) – Harmonium for Ben Johnston – Trill flowers fell – Pythagoras Drawing 2.

The form of the earlier composition has been extended with additional material. The initial tuning of open strings in “Prelude”, beginning with the Kammerton “A”, interweaves passages establishing the tuning relationships of the scordatura string instruments and natural trumpet. In the first “Drawing”, the winds join, tuning with the Pythagorean bordun tones of the quartet open strings and sketching melodic fragments touching the higher harmonics 5, 7, 11.

The “Vivier” sections features the quartet musicians playing solo without ensemble, exploring natural harmonics of their open strings in a sustained ecstatic melody. The following “Interlude” is a brief second intonation, featuring the tuning of the scordatura viola da gamba, harp and harpsichord, which become a kind of microtonal continuo ensemble in the following “Johnston” section. Here instruments from the larger ensemble join, support and at times reveal the string quartet’s gradual microtonal journey through Leonhard Euler’s harmonic lattice of major and minor triads linked by common tones. They colour and extend the quartet’s pure, consonant world of untempered major and minor triads, including recurring echoes of dissonant microtonal commas and higher harmonic partials tuned above and below the fundamental pitches. As the quartet gradually and imperceptibly moves away from the conventionally tuned pitches, these “near-tempered” tones are taken up by other instruments, suggesting distant harmonic relationships connecting the lattice-map of harmonic space. At the same time, the scordatura instruments with fixed pitches based upon these higher harmonics help to support and anchor the quartet’s microtonal modulations. In the following pages, a diagram of the 99 tones and the nearby higher partials is included.

“Flowers” adds an entirely new section in which the quartet takes the role of a sotto voce cantus firmus, playing a quartertone chorale slowly spiralling downward over the course of five transformations, with freely ornamentaed overlays played by changing intrumental subgroups of the ensemble collective. Each time the uppermost chorale voice falls an octave, until finally, the Ivesian harmony of the quartet is revealed, quiet and alone. The “Drawing 2”, backwards and transformed, suddenly closes the music box, bringing us back to the A with which we began.

About the notation

The use of extended just intonation applies both to vertical, harmonic structures and to melodic sequences of tones, asking players to hear and play many pitches which depart from conventional tempered tones. There is no fixed system, scale or number of tone-divisions, instead the entire tonal continuum is imagined as a fabric connected by rational interval relationships based on interlocking harmonic series. These relationships are are indicated in the score by attaching small numbers to each pitch, indicating cents (1/1200 octave), measured as deviations from the nearest tempered pitch. When the deviation from the spelling of the pitch would have exceeded ±50c, the nearest sounding pitch-class is written to facilitate work with an electronic tuner.

The ensemble chooses its Kammerton frequency based on the tuning of the fixed pitch percussion instruments, so that each individual player may rehearse using a clip microphone and electronic tuning device set to this chosen reference. In a performance, it is likely that the overall tuning will deviate at times, so it is important to explore several possible alternate fingering scenarios to be able to flexibly adapt to unexpected changes in the intonation.

More important than static, absolute pitch height is the players' perception and musical articulation of consonant harmonic relationships, which are dynamic and moving interactions of tones and their harmnonics. Several complementary notations indicate the intervallic relationships which allow pitches to be adjusted in context. The accidentals used are based on the Extended Helmholtz-Ellis JI Pitch Notation, which uses different symbols to show the characteristic tuning of various natural harmonic series primes:

3 (Pythagorean, fifths and fourths) is represented by using the conventional series of flats, naturals, sharps: therefore flats are tuned lower than enharmonically similar sharps by a Pythagorean comma, approximately 1/9 tone (23.5c);

5 (Ptolemaic, the consonant thirds and sixths) by attached arrows indicating the syntonic comma, lowering the Pythagorean ditone by approximately 1/9 tone (21.5c) to make a major third;

7 (Septimal, the bluesy low natural seventh and minor third) by Tartini's 7-like half-arrows indicating the septimal comma, lowering the Pythagorean intervals by approximately 1/7 tone (27c);

11 (Undecimal, the natural fourth-plus-quartertone) by Richard Stein's reverse flat and cross indicating the 32 : 33 quartertone (53c);

13 (Tridecimal, the neutral sixth) by quartertone symbols with a second vertical stroke indicating the 26 : 27 thirdtone (65c);

T (equal tempered half- and quartertones) are given by conventional accidentals with a small horizontonal line; sometimes also combined with cents deviations to indicate an exact microtone.

Please also see the following legend with symbols of the Helmholtz-Ellis Notation.

To help read the microtonal accidentals, or to clarify the characteristic sound or function of certain pitches, additional numerical notations are used. Readily tunable harmonic (vertical) pitch relations are written as frequency ratio fractions in boxes, representing simple consonant intervals. For example, a natural major third might be written as 5/4 (the interval between harmonics 4 and 5 of the series). In the following pages tables of tuneable intervals and of the harmonic series in HE notation are included to provide examples of these ratios.

Another indication used in the score consists of a harmonic series number (3, 5, 7, 11, 13) combined with either "u" or "˚" to indicate the function of a tone. For example, 7˚ means "sounds like a natural 7th harmonic *above* something" and u11 (under-11) means "tuned a quartertone plus fourth *below* something, which would then sound as its 11th harmonic".

Melodic intervals are often written as ratios and cent distances positioned between notes, using a colon notation. For example, the diatonic semitone *15 : 16 = 112c*.

In general, the composition attempts to provide consonant pitches in the instrumentation to allow the various microtones to be realised by ear, however, the sometimes dense microtonal counterpoint creates beatings and collisions which may disorient the ear. The style of articulating pitches in this context is perhaps closer to that in Byzantine song or Turkish, Arabic, Persian or Indian traditions, where the microtonal *sruti-region* of a complex pitch relationship is brought into awareness, and its exact, precise tuning found in the course of a subtle portamento into the center of pitch, rather than the Western convention of experiencing an "in tune" / "out of tune" dichotomy based on static pitch. The intention of the intonation is to maximise the resonance and sensation of both consonance and dissonance, the impression that melody and harmony are interwoven in a beautiful, at times complex network of relationships perceptible to the ear, interacting *tonally* at all times.

About the instruments

A number of instruments are given special scordatura tunings to more reliably provide some fixed microtonal pitches. On the following pages, charts are provided describing details of the various scordature. Small sequences of chords and little examples combining the instruments are included in the table and may be used freely, modified and extended as needed when tuning before a rehearsal or performance. All of the preparatory sounding of the tuning, hearing the intervals and their manifold relationships unfold may be considered a kind of ongoing overture-extension to the written piece, played ad libitum, and flowing into the explicitly composed “intonations”.

For the woodwind players, the use of instruments with dedicated quartertone keys (for example, Kingma System flutes, Howarth-Redgate oboes, etc.) is highly advised to come as close to the required pitches as possible. Adjustments of embouchure, though absolutely necessary when producing the pitches, are not sufficiently accurate or reliable used on their own to realise this score with the necessary accuracy. Seeking out alternate fingerings with clear and steady timbre (even if unusual or melodically quite varied) is recommended. Conventional fingerings should be tested with a tuner to determine their tendencies, which will vary from instrument to instrument.

The brass use valve tunings based on just ratios as described in the tables, and unconventional valve combinations are used to provide a larger microtonal gamut. Suggested fingerings to get close to desired pitches are given in the score, but players are encouraged to seek out other, possibly better solutions which facilitate the accurate and expressive realisation of the written pitches. Sometimes it may be more musical to use more lip adjustment or a temporary change of valve-slide position to obtain a suitable timbre or to articulate small microtonal variations. Mutes which allow accurate tuning may be used when their colour benefits balance and harmonic clarity, the realisation of an appropriate dynamic, ad libitum, but they are not specified in the score.

The tempered (fixed-pitch) percussion – Glockenspiel, Vibraphone, Crotales and Marimba – should be chosen so that their frequencies are as close to equal-tempered tuning as possible, sharing the same reference frequency in Hz. This frequency will determine the Kammerton shared by the ensemble when setting tuning meters and used for tuning the scordatura fixed pitch instruments.

The percussionists are also asked to assemble a heterogenous set of tuned objects to form a specific microtonal scale and additionally to lower 5 tones of the marimba to the pitch-height of the natural 7th harmonic. The pedal harp and harpsichord are tuned microtonally, as are the ensemble strings: violin, viola, cello and a 7-string bass viola da gamba with double frets.

The harpsichord and the harp are to be subtly reinforced with amplification. The impression for the ensemble and the audience should be of a natural, acoustic balance.

The dynamic level is, for the most part, soft. The ensemble shades and colours, only rarely envelops, the solo string quartet, which (even when very soft) should remain at the centre of the music. Written dynamics are mere suggestions to phrasing and articulation, and may be interpreted with freedom. Because there are many sustained tones, musicians may breathe or change bow whenever needed. Seek timbres which maximise harmonic interaction and blend with each other and with the other instruments.

Regarding the flow of time, the perception of intonations and modulations, swiftly but fully and clearly revealed, should inform pacing. The music is never metronomic, with the exception of the “Vivier” movement for solo quartet. In “Flowers”, the time should flow particularly slowly and flexibly. Each “bar”, conducted and felt mostly in 1, is part of a larger grouping of bar-units, which articulate an underlying harmonic chorale. Time may be plastic rather than strict, responsive to the density of material and the particular circumstances of each performance. The vertical coordination between instruments may at times need to be clearly, precisely realised, and at other times may take place more freely, independently.

To provide an overview of fermatas and of the harmonic skeleton, there is a two-stave cue line provided in the score. This is given simply as an aid to conducting the work and to pointing out some of the tonal references or composite melodic lines, and as not intended as a full particell of “primary” material to be highlighted. In the “Johnston” movement, each bar is based on one central tone, above or below which a triadic harmony and various higher partials are articulated. These central tones are indicated either with “1˚” (above which harmonic intervals form a major triad) or “u1” (below which subharmonic intervals form a minor triad).

The music is dedicated to Harry Partch, who introduced the 11-limit.

Berlin, November 2016

STAGE PLAN

Harpsichord
(amplified)

Piano
(without
lid)

Harp
(amplified)

Perc1
Glock
Vibes

Tp2

Perc2
Crotales
Marimba

Tp1

Tb

Hn

Ob

Sax

Tuba

Fl2

Cl1

Ens Vla

Fl1

Ens Vl

Ens Vc
Gamba

Cl2

SQ Vl2

SQ Vla

SQ Vl1

SQ Vlc

Conductor

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 wholetone 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 ! 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 wholetone 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 thirdtone 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.

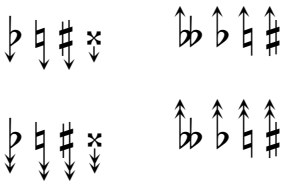
ACCIDENTALS

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 = ***circa 21.5 cents***

lowers / raises by two syntonic commas
circa 43 cents

lowers / raises by a septimal comma
64 : 63 = ***circa 27.3 cents***

lowers / raises by two septimal commas
circa 54.5 cents

raises / lowers by an 11-limit undecimal quarter-tone
33 : 32 = ***circa 53.3 cents***

lowers / raises by a 13-limit tridecimal third-tone
27 : 26 = ***circa 65.3 cents***

lowers / raises by a 17-limit schisma
256 : 255 = ***circa 6.8 cents***

raises / lowerss by a 19-limit schisma
513 : 512 = ***circa 3.4 cents***

raises / lowers by a 23-limit comma
736 : 729 = ***circa 16.5 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.

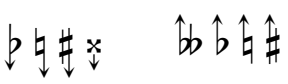
VORZEICHEN

EXTENDED HELMHOLTZ-ELLIS JI PITCH NOTATION

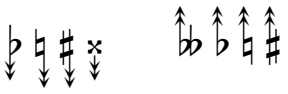
für die natürliche Stimmung
konzipiert von Marc Sabat und Wolfgang von Schweinitz

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

Pythagoreische Quintenreihe der leeren Streicher-Saiten
(. . . c g d a e . . .)



Erniedrigung / Erhöhung um ein Syntonisches Terzkomma
81 : 80 = ***circa 21.5 cents***



Erniedrigung / Erhöhung um zwei Syntonische Terzkommas
circa 43 cents

Erniedrigung / Erhöhung um ein Septimenkomma
64 : 63 = ***circa 27.3 cents***

Erniedrigung / Erhöhung um zwei Septimenkommas
circa 54.5 cents

Erhöhung / Erniedrigung um den undezimalen Viertelton der 11er-Relation 33 :
32 = ***circa 53.3 cents***

Erniedrigung / Erhöhung um den tridezimalen Drittelton der 13er-Relation 27 :
26 = ***circa 65.3 cents***

Erniedrigung / Erhöhung um ein Siebzehner-Schisma
256 : 255 = ***circa 6.8 cents***

Erhöhung / Erniedrigung um ein Neunzehner-Schisma
513 : 512 = ***circa 3.4 cents***

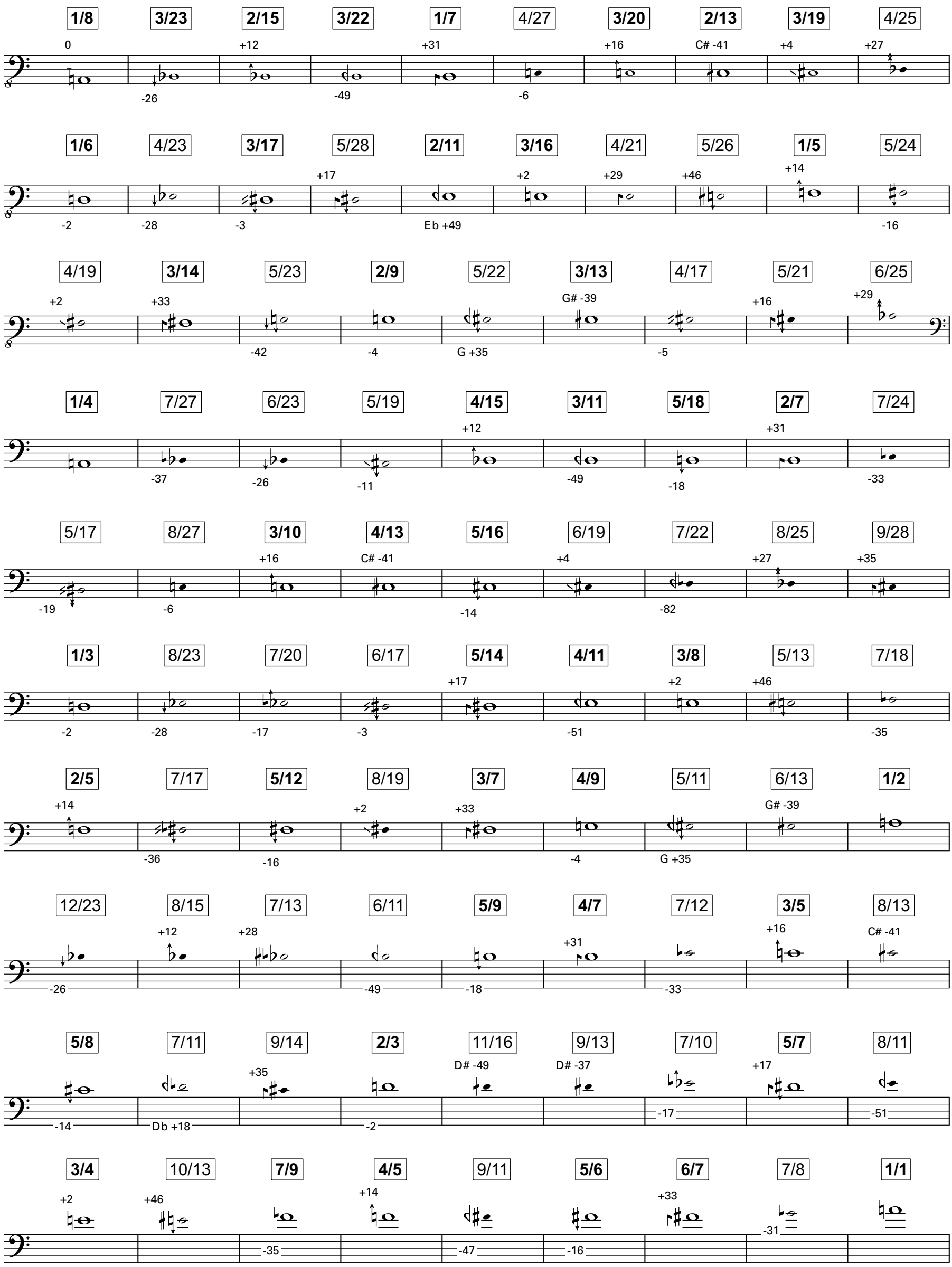
Erhöhung / Erniedrigung um ein Dreiundzwanziger-Komma
736 : 729 = ***circa 16.5 cents***

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.

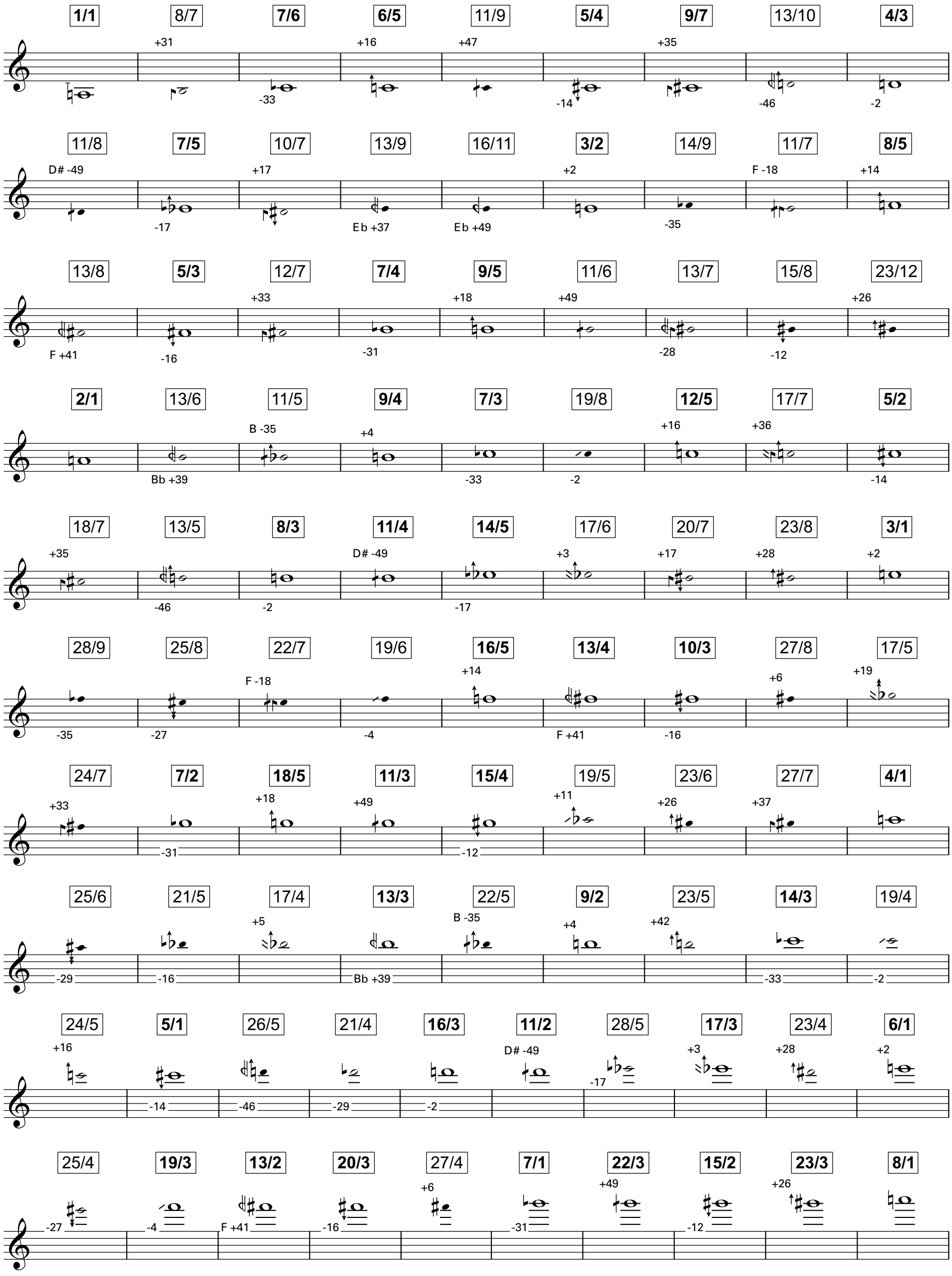
23-LIMIT TUNEABLE INTERVALS below “A4”

tested and notated in three gradations of difficulty (large open notehead = easiest ; small black notehead = most difficult)
by Marc Sabat (violin/viola) with assistance from Wolfgang von Schweinitz (cello), Beltane Ruiz (bass), Anaïs Chen (violin)—Berlin, 2005



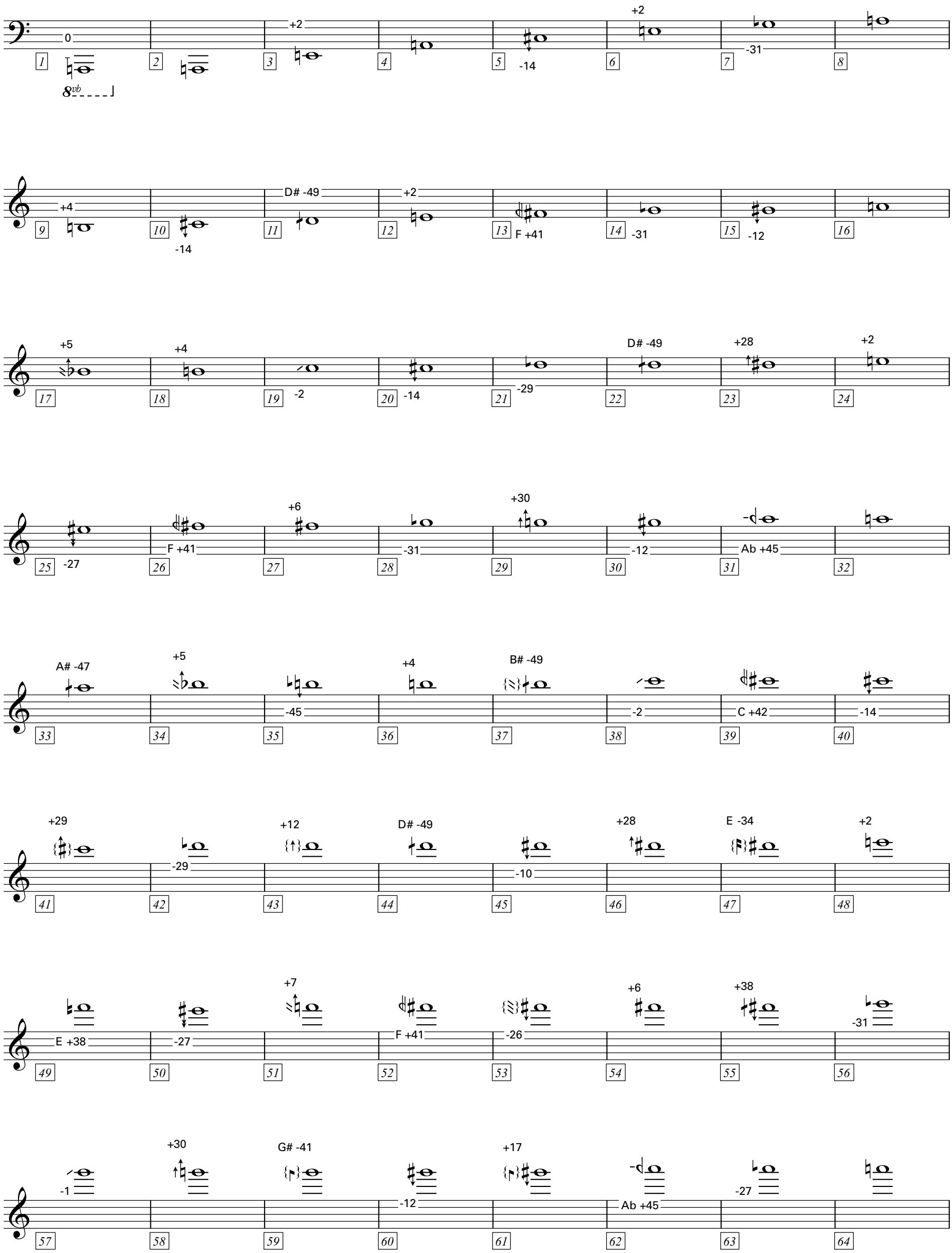
23-LIMIT TUNEABLE INTERVALS above “A3”

notated using the Extended Helmholtz-Ellis JI Pitch Notation with cents deviations from 12-tone equal temperament based on A = 0 cents
microtonal accidentals designed by Marc Sabat and Wolfgang von Schweinitz, 2004



THE HARMONIC SERIES 1 - 64 above “A0” (overtone row)

notated using the Extended Helmholtz-Ellis JI Pitch Notation
microtonal accidentals designed by Marc Sabat and Wolfgang von Schweinitz, 2004

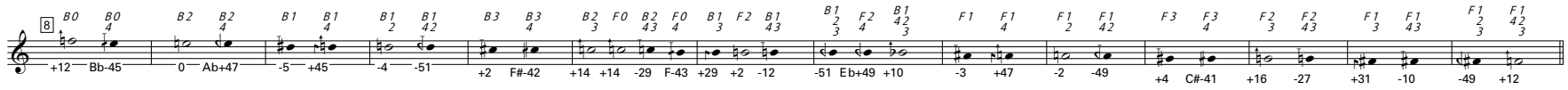


SCORDATURE

Brass

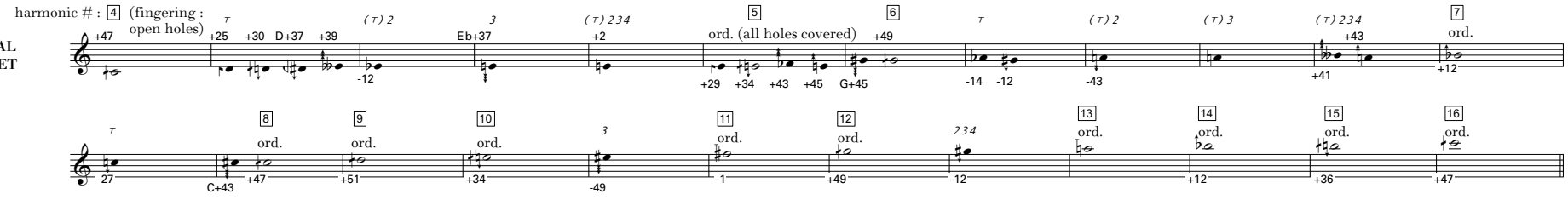
Valve-slide tuning for double horn with extended length 3rd valve and quartertone valve to produce a descending subharmonic series of fundamentals in the proportion 30 : 31 : 32 : 33 : 34 : 35 : 36 : 37 : 38 : 39 : 40 : 41 : 42 : 43 : 44 : 45.
Please check white noteheads first, then verify the descending series, making compromises where necessary.
The main slide is tuned slightly high for both Bb+12 and F+14 sides of the double horn so that the untempered 5. partials D-2 and A+0 match the open strings.
The 2nd valve is tuned to produce a large diatonic semitone 16 : 15 = -112c.
The 1st valve is also made slightly longer so that in combination 1+2 produces a just minor third 6 : 5 = -316c.
The specially lengthened 3rd valve is tuned so that 2+3 produces a just fourth 4 : 3 = -498c.
The quartertone 4th valve is adjusted so that the combination of all valves lowers by a just fifth 3 : 2 = -702c.
The pitches are written sometimes (in simpler cases) as Helmholtz-Ellis accidentals, to indicate the proportional harmonic relationship.
Otherwise, the nearest tempered quartertone is given, using accidentals modified with a small horizontal line to resemble the letter "T".
Fingerings given in the score are deduced from harmonic series of these valve-combinations to approximate the microtonal pitches.
Since actual overblown series are not always exactly harmonic, and may be adjusted by various lip and hand corrections,
the player is encouraged to find the best sounding alternate fingerings by experimentation using this table as a starting point.

HORN in F



Natural trumpet with 4 venting holes, combining an A-415 Bb yard and a Bb lead-pipe with a D crook to produce the fundamental C+47c measured at modern concert pitch.
The actual pitches of the natural series are written at sounding pitch, inflected in the score with microtonal accidentals which may be ignored when playing..
In the table below they are also indicated by white noteheads with boxed numbers indicating harmonics of the quartertone-high C, 11° over Pythagorean F.
Please adjust pitches when playing to produce the harmonic series as close to its untempered tuning, indicated in cents.
Additional tones are produced by opening various combinations of the four venting holes and by lipping.
Open holes are indicated as combinations of the symbols T,1,2,3 to show the finger(s) to be lifted.
Various pitches within one bar to be produced by slight embouchure adjustment.
Ord. is written when playing ordinary harmonics with all holes covered.

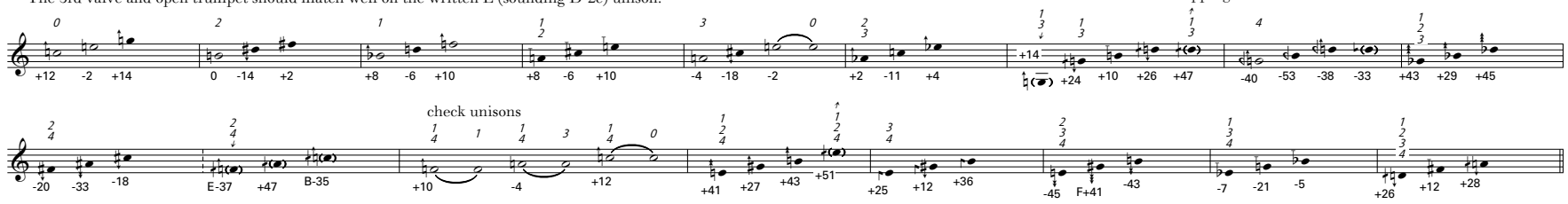
NATURAL TRUMPET



Piccolo trumpet in Bb with four valves, tuned to natural intervals.
Please check cents deviations of white noteheads first, followed by unisons with the valve combination 1+4, then verify the remaining combinations, adjusting valve slides as needed.
Open trumpet should sit comfortably on the slightly high side (sounding Bb+12).
The 2nd valve is tuned to produce a large diatonic semitone 16 : 15 = -112c down to concert A.
The 1st valve is tuned to produce a Pythagorean wholetone 9 : 8 = -204c (sounding Ab+10).
The 3rd valve and open trumpet should match well on the written E (sounding D-2c) unison.

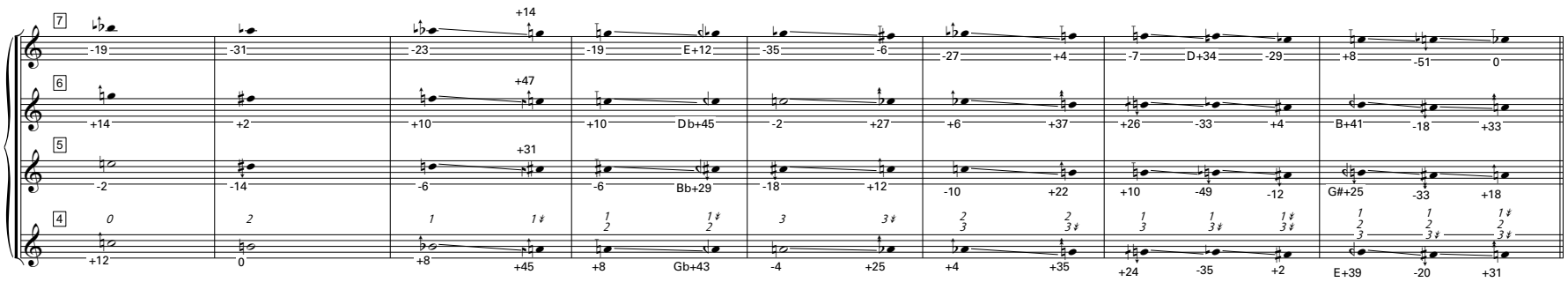
please check possibility of lipping bracketed tones in tune

PICCOLO TRUMPET in B♭



Trumpet in Bb with freely moveable slides on 1. and 3. valves.
Please check cents deviations of white noteheads first.
Open trumpet should sit comfortably on the slightly high side (sounding Bb+12).
The 2nd valve is tuned to produce a large diatonic semitone 16 : 15 = -112c down to concert A.
Lower limit of valve slides 1 and 3 may vary, in this table they cover ca. -70c, and fingerings given in the score are based approximately on this range of alteration.
Since there are often alternate fingerings and lip adjustments possible, the players are encouraged to find the best sounding alternate fingerings by experimentation using this table as a starting point

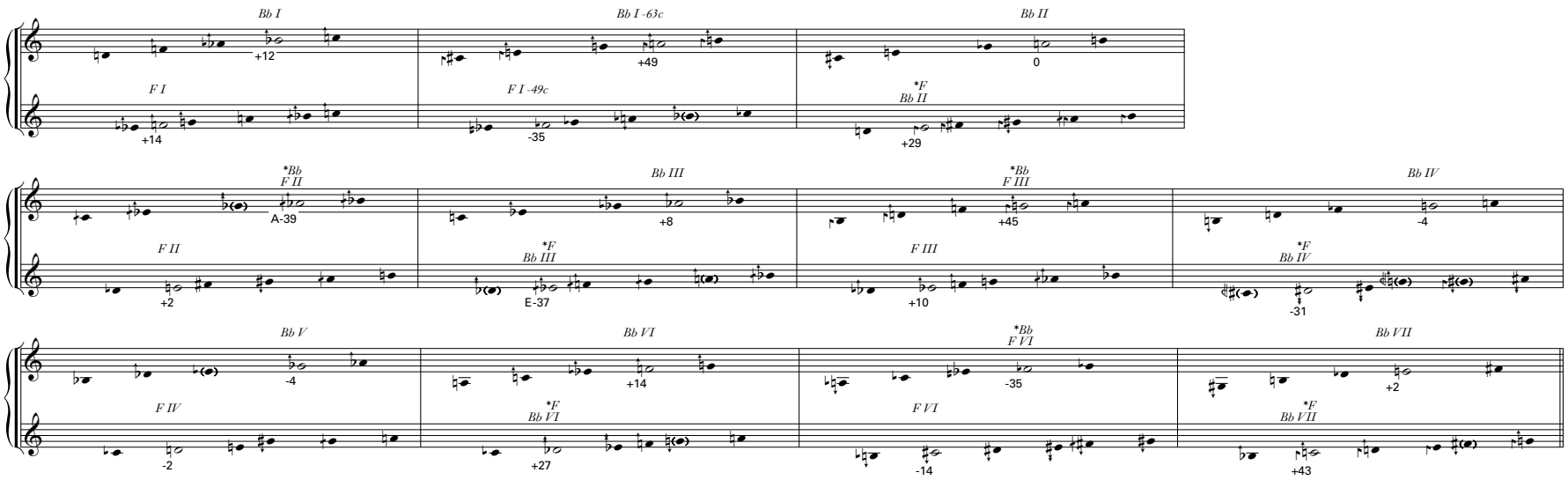
TRUMPET in B♭



Tenorbass trombone in Bb and F.
White noteheads indicate the fundamental pitch-class in each position (8. Partial).
Bracketed notes indicate enharmonically respelled (simplified) variants of the respective partials. other pitches are wriiten in Helmholtz-Ellis notation.
The main slide is to be tuned to a slightly high Bb+12 in position Bb I and the trigger-valve-slide shortened so that it makes a true perfect fourth 4 : 3 = -498c down to F+14 in position F I.
Changing the trigger while keeping more or less the same slide position to obtain microtonal pitch relationships is indicated in the score with a *.
Since actual overblown series are not always exactly harmonic, in practice notes will need slight corrections to create the true "natural" relationships.

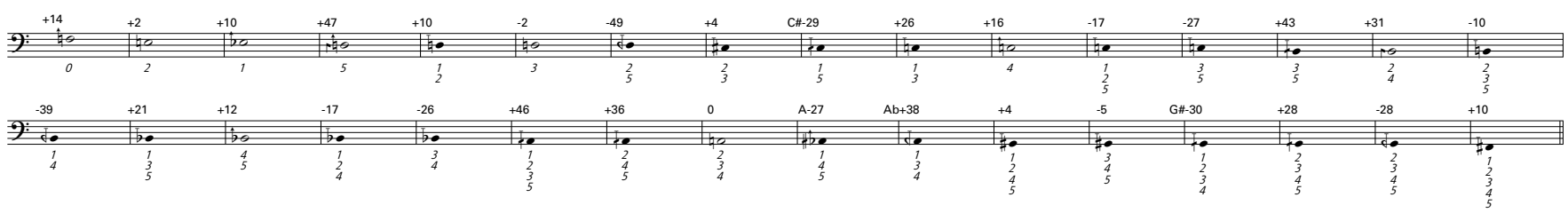
TROMBONE Bb-side

TROMBONE F-side



5-valve F-tuba with valve-slides tuned to natural intervals.
Please check white noteheads first, then verify the descending series, making compromises where necessary.
The main slide is tuned slightly high to F +14 so that the untempered 5. partial A matches the ensemble's Kammerton.
The 2nd valve is tuned to produce a large diatonic semitone 16 : 15 = -112c (E+2).
The 1st valve is also made slightly longer so that it produces a Pythagorean wholetone 9 : 8 = -204c (Eb+10).
The 3rd valve is tuned to a just minor third 6 : 5 = -316c (D-2).
The 4th valve is tuned to a perfect fourth 4 : 3 = -498c (C+16).
The 5th valve is tuned so that the combination 4+5 produces a perfect fifth 3 : 2 = -702c (Bb+12) and 5 on its own produces the septimal minor third 7 : 6 = -267c (D+47).
The pitches are written sometimes (in simpler cases) as Helmholtz-Ellis accidentals, to indicate the proportional harmonic relationship.
Otherwise, the nearest tempered quartertone is given, using accidentals modified with a small horizontal line to resemble the letter "T".
Fingerings given in the score are deduced from harmonic series of these valve-combinations to approximate the microtonal pitches.
Since actual overblown series are not always exactly harmonic, and may be adjusted by various lip and air pressure corrections,
the player is encouraged to find the best sounding alternate fingerings by experimentation using this table as a starting point.

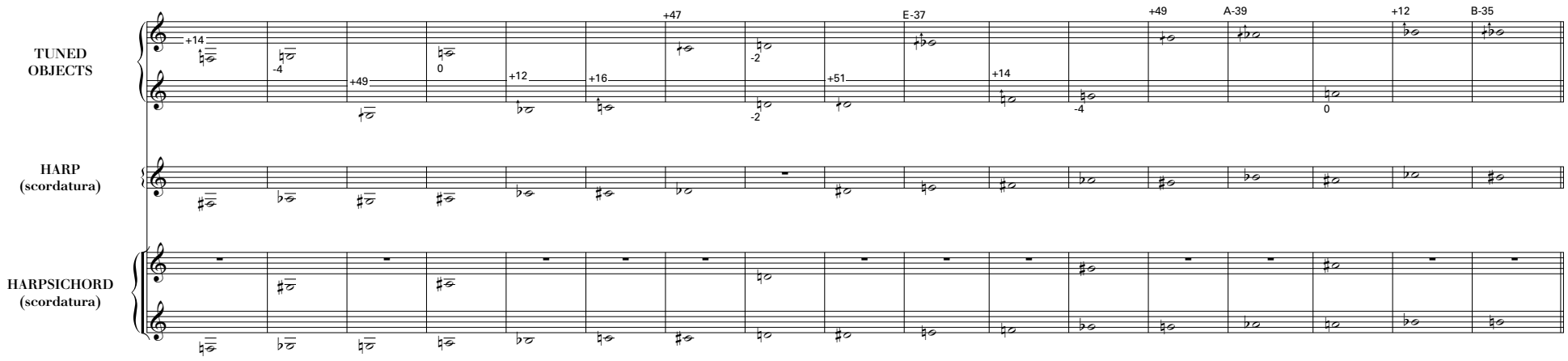
5-VALVE F-TUBA



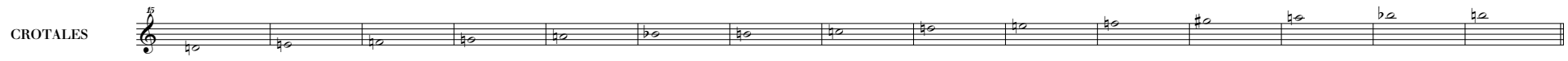
Percussion

Percussion: select fixed-pitch instruments (crotales, vibraphone, glockenspiel, marimba) with the same reference frequency and verify that the pitches match closely in all registers.
The common frequency of A4 will determine the choice of ensemble Kammerton.
The marimba has five specially prepared tones, lowered about -31c to match the natural harmonic sevenths of the respective tempered fundamentals, using plasticine or similar material.

Additionally, a scale of various tuned objects is to be chosen by the two players.
Any materials (metal, glass, tubes, bowls, plates, gongs, cowbells, mbira, etc.) may be included.
Seek out a variety of tone colours to create a diverse gamut of timbres identifiable as the written pitches and suitable for combination with harp and lute-stop harpsichord.
Choose mainly ringing sounds with, for the most part, somewhat longer decays, ranging in spectrum from a pure tone to somewhat complex mixtures of harmonics, but always with salient pitch.
Please measure the frequencies precisely, while playing at a generally soft dynamic; each sound should give the impression of having a primary or fundamental frequency at the pitch and in the octave written.
Fine-tune as needed by applying small amounts of plasticine or similar materials.

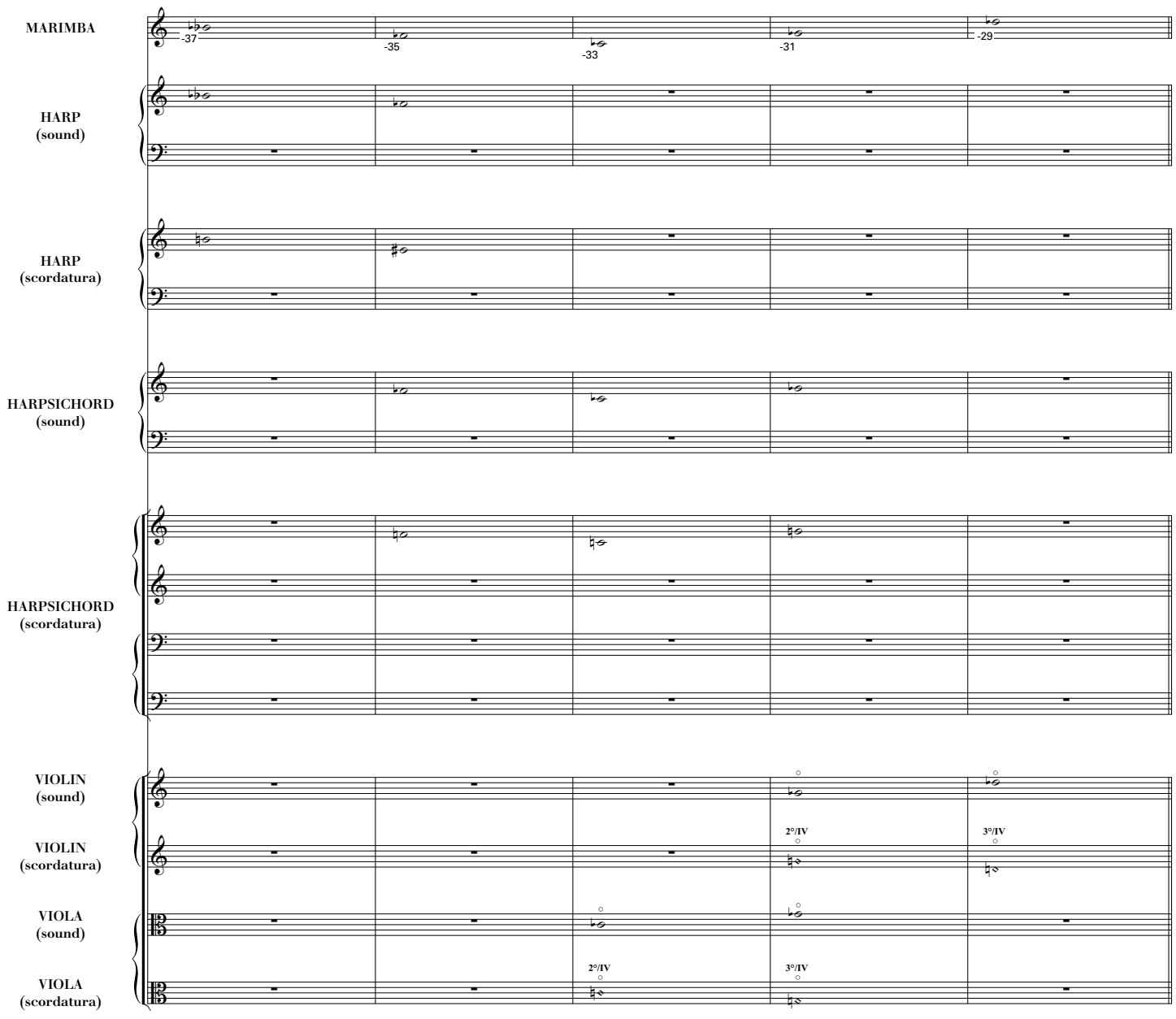


The following pitches of crotales occur.
Please choose instruments as close in tuning to the equal tempered pitches (0c) as possible.



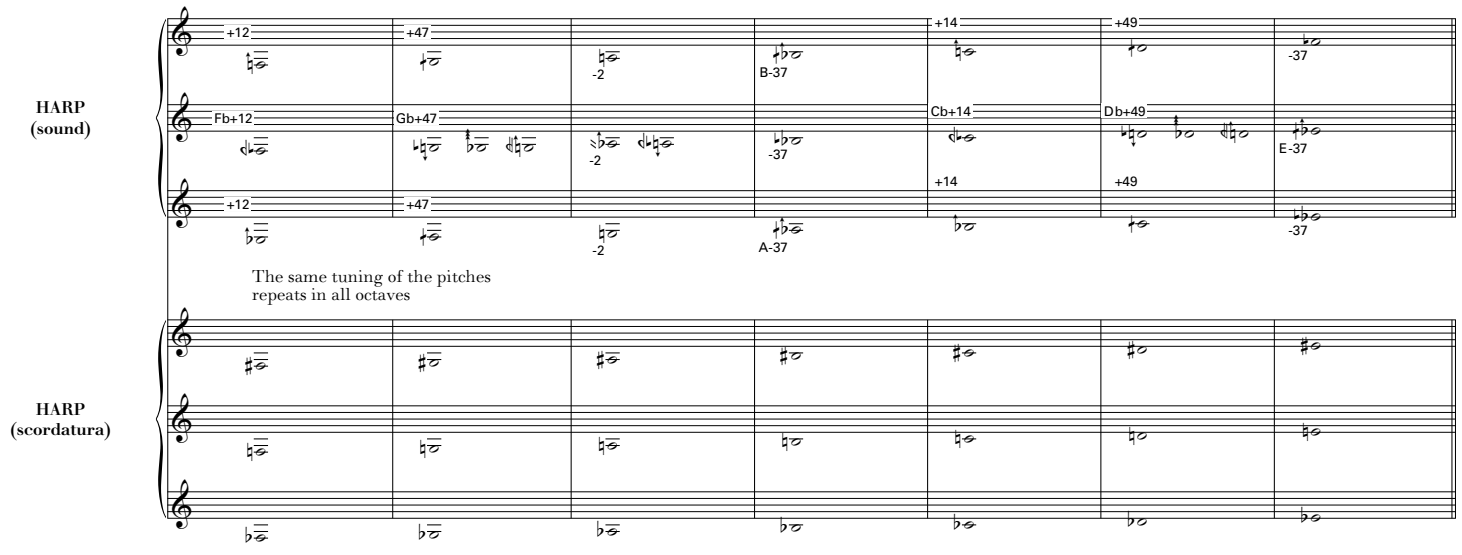
Please retune the following five marimba tones by adding a little plasticine or similar mass to the bars in such a manner to lower the fundamental without losing too much natural resonance.
The cents values indicated are the deviations of natural 7th harmonics from the open strings C-G-D-A-E tuned Pythagorean.
Because of the marimba's tempered tuning and inharmonicity, these cent values may be slightly tempered, but should not deviate too far from -31c.
They should sound " in tune" with each other (as fourths and fifths) and with the respective harp, harpsichord, ensemble viola/violin tones indicated below.

Lowest marimba pitch used in the score: Gb2

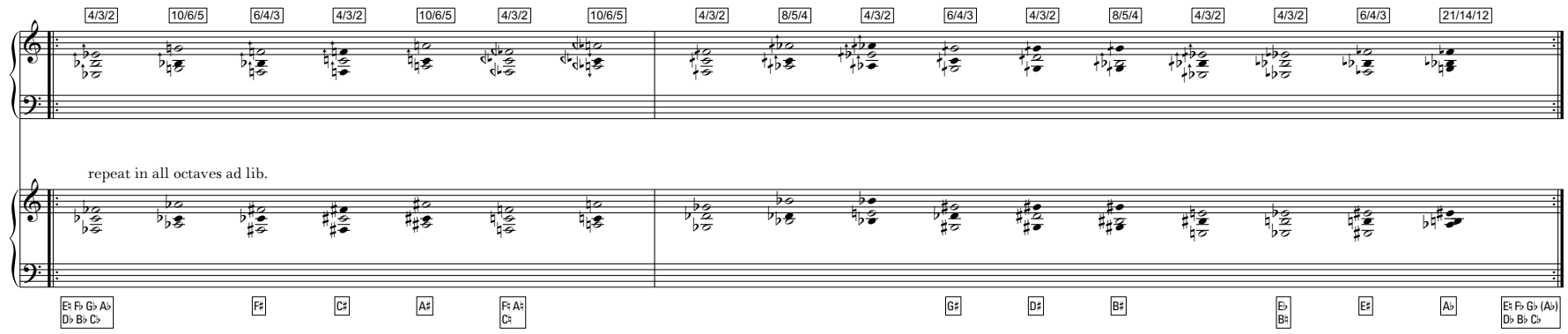


Harp / Harpsichord

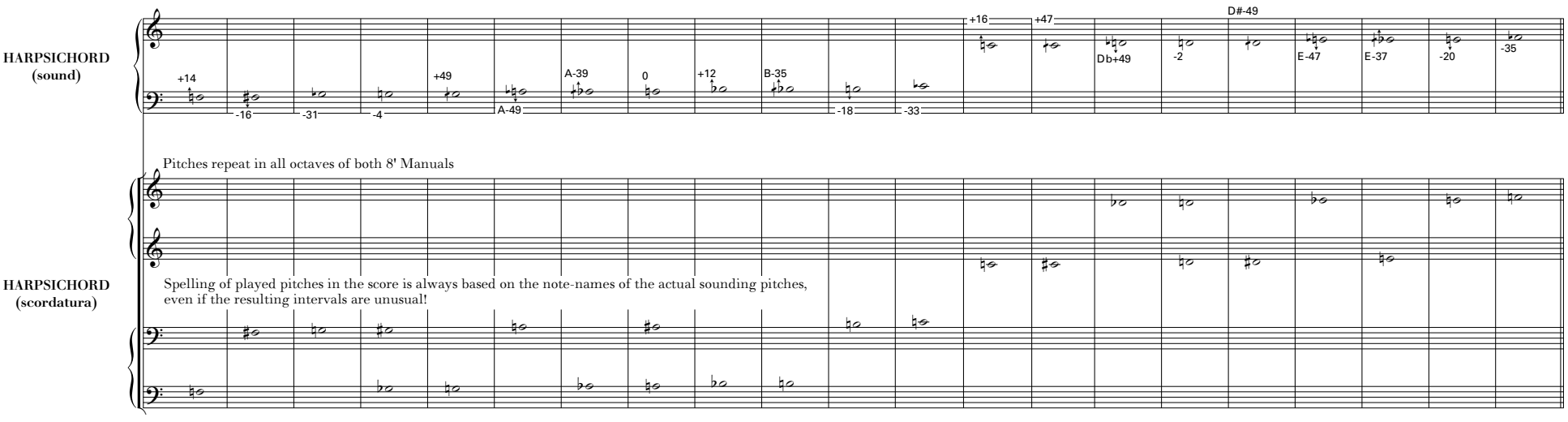
Chromatic pedal harp in a scordatura tuning: the cents values given are based on an "ideally adjusted" pedal mechanism producing tempered alterations of 100c.
In practice, these cents values may require subtle compromises to obtain good octaves and fifths in the various pedal settings.
Harp is notated twice in both score and parts: at sounding pitch (sound) and at playing pitch (scordatura).
Pedal indications for changing pitches are given in boxes below the scordatura staff.
Cautionary pedaling is indicated by notes in brackets.



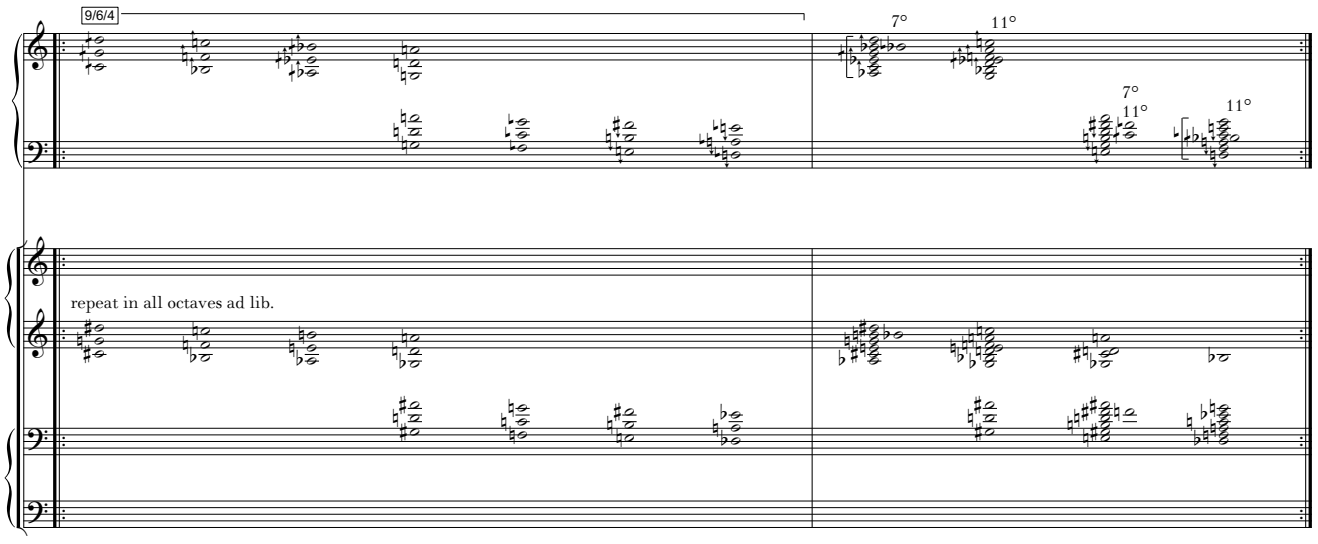
The following sequence of chords moves through the main triadic consonances.
Please find a tuning which optimises the sweetness of as many of the chords as possible.
Note that the fifths between similar pedal settings (b-b, #-#) are the most pure.



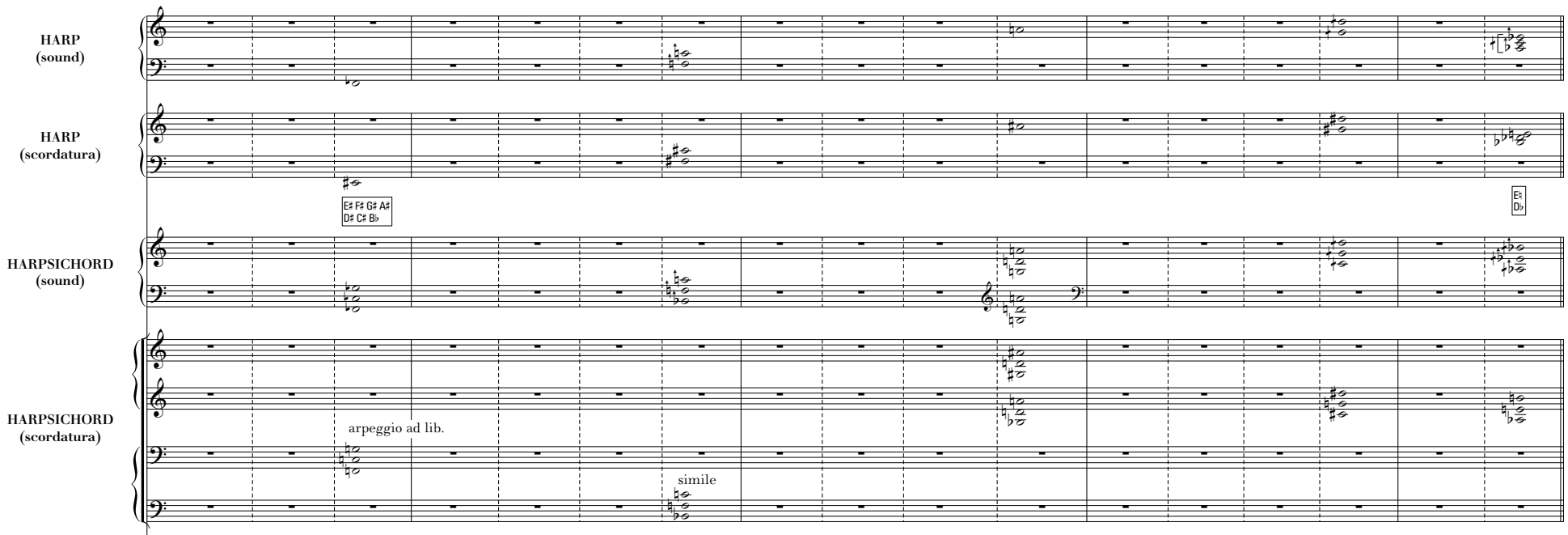
2-manual harpsichord in a scordatura tuning.
The two 8' registers are to be assigned to the two manuals (uncoupled) and tuned differently from each other as indicated below.
The 4' is not used, but if it resonates audibly, then it should be tuned to the manual it is linked to. A lute stop for both manuals is used in the score.
Harpsichord is notated twice in both score and parts: at sounding pitch (sound) and at playing pitch (scordatura).
The scordatura staff is written on 4 staves. The upper treble and bass staves indicate tones played on the upper manual, the lower treble and bass staves indicate tones played on the lower manual.



The following sequence of chords moves through the main consonances.
Please find a tuning which optimises the sweetness of as many of the chords as possible.

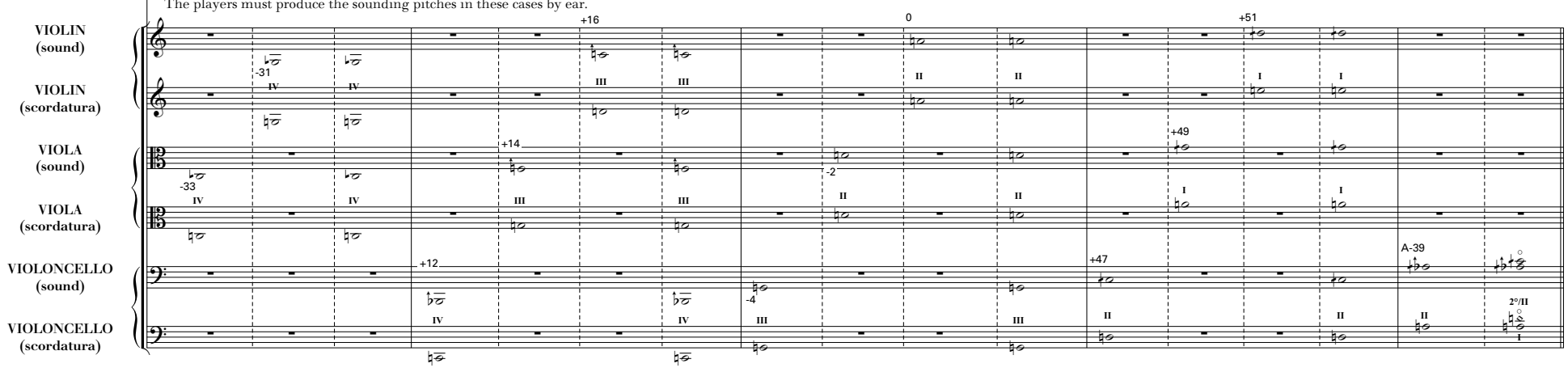


Strings

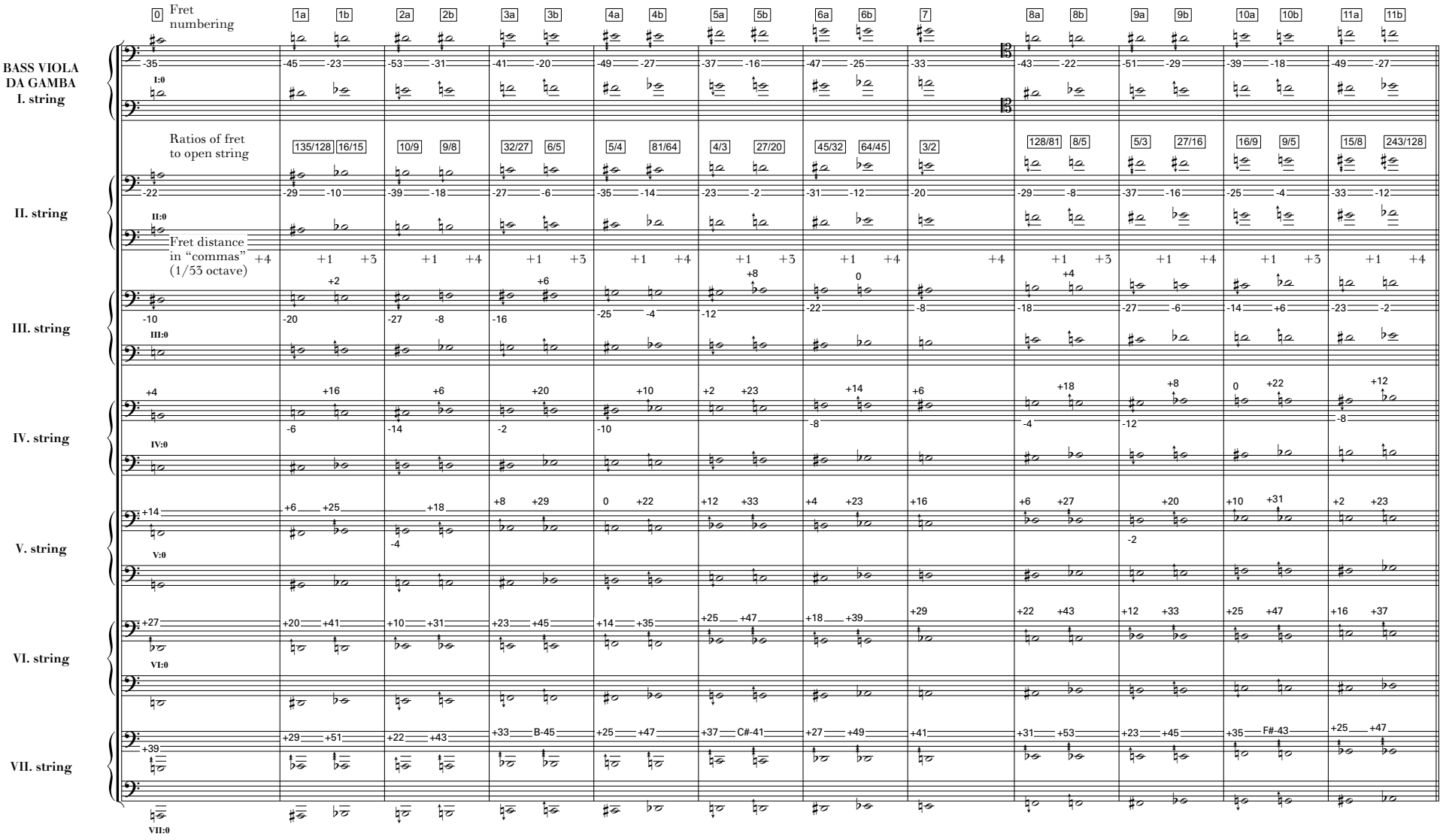


Violin, viola, violoncello in a scordatura tuning.
The four open strings are retuned as indicated below.

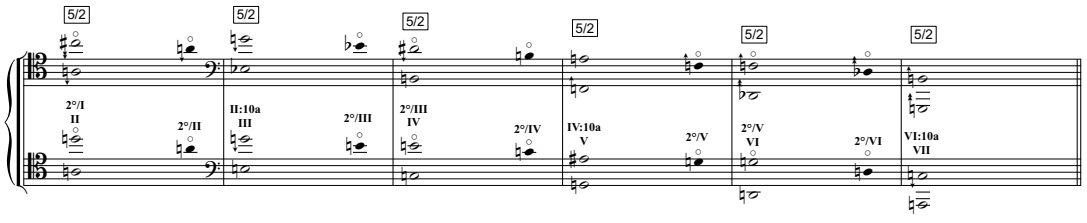
String parts are notated twice in both score and parts: at sounding pitch (sound) and at playing pitch (scordatura).
Pitches in the sounding stave are indicated exactly, using Helmholtz-Ellis accidentals and cents.
Pitches in the scordatura stave are indicated using exact melodic cents, Roman numerals, harmonic numbers, and ratios, to help realise the microtonal tunings.
The occasionally occurring stopped pitches use an "approximate" accidental notation to indicate where the fingering would lie in a normal tuning of the respective string.
The players must produce the sounding pitches in these cases by ear.



7-string bass viola da gamba in a scordatura tuning with double frets at each chromatic pitch up to and including the octave.
Please adjust the position of each split fret to facilitate producing the indicated *untempered* cents deviations on each string as closely as possible.
The score and parts are written on two staves. The upper stave has the sounding pitches, written in Helmholtz-Ellis notation.
Tones one schisma apart are notated *enharmonically*, on the same fret, for example open III may be written as Eb or as D#-comma-down.
The lowers staff has the fingered pitches, written in Baroque tuning (A-D-G-c-e-a-d'). Arrows or sharp/flat spelling respectively indicate split frets (always one comma, ca. 22c, apart).

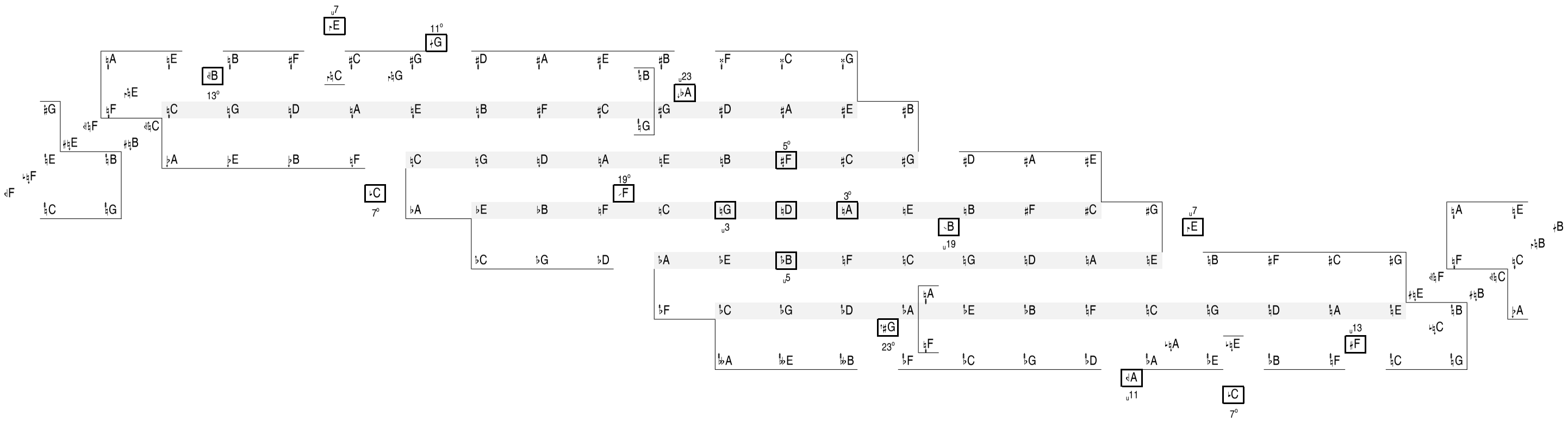


The following sequence of double-stops moves through the main triadic consonances.
Please find a tuning which optimises the sweetness of these dyads.



53-TONE 5-LIMIT EULER LATTICE (SHADED) WITH 46 ENHARMONIC BORDER TONES & 23-LIMIT HARMONICS / SUBHARMONICS FROM D

Marc Sabat (2016)



Transposing Score

Asking ocean

Prelude (intonation)

Marc Sabat

Tempo ad libitum, take time necessary to sound a precise, stable intonation *
Within each bar, repeat and move through the patterns freely as required, going back if and when needed

Natural Trumpet (2)

tuned to fundamental C +47 written at sounding pitch

Cues

instruments tuning: (SQ Vl2) (Ens Vl) +16 (SQ Vl1)

These staves provide some cues (fermatas, harmony). Please allow the respective instrument time to adjust and check a precise, centered tuning. Once the player cues that s/he is ready, proceed.

SQ Violin 1

exact accidentals, cents (please use clip microphone and tuner with cents readout ranging +/- 50c)

ad lib. *mezza voce, tenuto* ad lib. adjust tuning of open strings A and E as required, check A tuning with SQ Vl2, cue to proceed +2 *sotto voce*

SQ Violin 2

ad lib. *mezza voce, tenuto* adjust tuning of open strings A and E as required, cue to proceed +2 *sotto voce* *mezza voce (m.v.)*

bracketed comma indicates optional pauses between patterns 2°/I (,) 2°/II (,) 3°/II I II I *sotto voce (s.v.), libero* if needed, adjust E string, check fifth with A string until E's are in unison

comma indicates a pause in playing check SQ Vl1 A tuning 2°/II *s.v.*

SQ Viola

SQ Violoncello

ad lib. even bow pressure 4°/I *mezza voce, tenuto* *sotto voce* *mezza voce (m.v.)*

sempre simile 3°/I *sotto voce (s.v.)* *mezza voce (m.v.)*

4°/I *poco port. ad lib.* *s.v.* *m.v.*

Violin (sound)

sounding pitches: exact accidentals, cents (please use clip microphone and tuner with cents readout ranging +/- 50c)

ad lib. +16

bracketed comma indicates optional pauses between patterns (,) (,)

comma indicates a pause in playing

Violin (scordatura)

fingered pitches: approximate accidentals, melodic cents

ad lib. 5/3 III *mezza voce, tenuto* *sotto voce* *mezza voce (m.v.)*

adjust tuning of open strings A and D as required, use clip microphone and electronic tuning meter, check against SQ pitches to minimize beating, cue to proceed

2°/II 5°/III *sotto voce (s.v.), libero* 5/1 3°/II (,) 3°/II 5°/III II III if needed, adjust D string, check open strings again: optimise unison between E's

Viola (sound)

Viola (scordatura)

Violoncello (sound)

Violoncello (scordatura)

Cues

(Ens Vl) D#-49 11/4 (SQ Vla) (Ens Vl) -31

SQ Vl1

comma indicates a pause in playing check E tuning with SQ Vl2 I

bracketed comma indicates optional pauses between patterns 2°/I (,) 2°/II (,) 3°/II I II I *sotto voce (s.v.), libero* if needed, adjust E string, check fifth with A string until E's are in unison

2°/II *s.v.* check SQ Vla A tuning

SQ Vl2

check E tuning with SQ Vl1 I

even, clear bowing, match Ens Vln pitch II +16 III 6/5 I *ppp* *molto preciso*

SQ Vla

ad lib. I *mezza voce, tenuto* adjust tuning of open string(s) as required, cue to proceed *sotto voce (s.v.)*

comma indicates a pause in playing check A tuning with SQ Vl1

SQ Vc

11°/I keep pitch as stable and even as possible D#-49 I 3°/I *s.v.* *m.v.* 7°/I

Vln (snd)

D#-49 -31

Vln

come prima 4°/I I 2°/I 11/4 II *m.v.* *s.v.* *m.v.* tune E string primarily according to meter check against SQ Vlc (come prima)

wait until SQ Vla has tuned and cued 2°/III I 4°/III *s.v.*

2°/IV IV *m.v.*

* In the course of this section, the open strings are to be tuned just: tuning in cents relative to 12-tone equal temperament; players should use clip microphones and digital tuning meters or software with precise cents readout calibrated to the commonly agreed Kammerton (this determined by the fixed pitch percussion). The solo string quartet is tuned in Pythagorean fifths (E +2, A 0, D -2, G -4, C -6) and the ensemble strings in scordatura tunings as indicated — the written patterns may be interwoven dynamically and repeated freely in the manner of normal tuning procedure, to achieve the most precise tuning as swiftly as possible; the sound of actually tuning the strings by adjusting the pegs is intentionally part of the music; accuracy is facilitated by using fine tuners for each string.

8

Cues

(SQ Vc)

(SQ Vla)

(Ens Vla)

SQ Vl1

even, clear bowing
match P5 below Ens Vln,
wait until SQ Vc has
tuned and cued

beating with
SQ Vl2

ppp
molto preciso

mezza voce
(m.v.)

SQ Vl2

match Ens Vln

beating with
SQ Vl1

check intervals with Ens Vln:
A = 8/7, 5/6, 1/1

ppp
molto preciso

mezza voce
(m.v.)

m.v.

SQ Vla

s.v.

mezza voce
(m.v.)

bracketed comma indicates
optional pauses between patterns

s.v.
libero

if needed, adjust D string,
check fifth with A string
until A's are in unison

SQ Vc

adjust tuning of open string(s)
as required, cue Vl1 to proceed

m.v.

bracketed comma indicates
optional pauses between patterns

comma indicates
a pause in playing

s.v.
libero

if needed, adjust D string,
check fifth with A string
until A's are in unison

m.v.

s.v.

m.v.

Vln (snd)

wait until SQ Vc
has tuned and cued

Vln

s.v.

check intervals
with SQ Vl2 A

check for P5
with Ens Vla

Vla (snd)

ad lib.

adjust tuning of open strings D and G as required,
use clip microphone and electronic tuning meter,
check against SQ pitches to minimize beating,
cue to proceed

check for P5
with Ens Vln

Vla

ad lib.

mezza voce,
tenuto

sotto
voce

mezza voce
(m.v.)

11

Cues

(SQ Vl2)

(Ens Vla)

G+49

(SQ Vl1)

SQ Vl1

m.v.

come prima

SQ Vl2

come prima

check A tuning
with Vla

s.v.

if needed, adjust D string,
check fifth with A string
until A's are in unison

SQ Vla

check Vl2
D tuning

s.v.

check A tuning
with Vl2

s.v.
poco

SQ Vc

m.v.

s.v.

m.v.

come
prima

m.v.

ppp
molto preciso

m.v.

Vln (snd)

Vln

check for P5
with Ens Vla

Vla (snd)

bracketed comma indicates
optional pauses between patterns

comma indicates
a pause in playing

G+49

Vla

sotto voce
(s.v.), libero

if needed, adjust G string,
check open strings again:
optimise unison between A's

m.v.

come
prima

check for P5
with Ens Vln

s.v.

m.v.

tune A string primarily according to meter
check against SQ Vlc (come prima)

wait until SQ Vl1
has tuned and cued

s.v.

14

Cues

(Ens Vla)

(SQ Vc)

SQ Vl1

check D tuning with Vla, Vl2

if needed, adjust D string, check fifth with A string until A's are in unison

SQ Vl2

check D tuning with Vl1

poco

SQ Vla

check D tuning with Vl1

even, clear bowing

(hold finger position)

check intervals with Ens Vla: D = 8/7, 5/6, 1/1

ppp molto preciso

SQ Vc

come prima

even, clear bowing

molto preciso

Vln (snd)

Vln

check for P5 with Ens Vla

Vla (snd)

Vla

check for P5 with Ens Vln

allow SQ Vla time to establish septimal m3 (7/6)

allow SQ Vlc time to establish M6 (5/3)

check intervals with SQ Vla D

Vc (snd)

Vc

mezza voce, tenuto

17

Cues

(Ens Vc)

SQ Vl1

SQ Vl2

ppp molto preciso

intonation come prima

SQ Vla

SQ Vc

Vln (snd)

Vln

change bow as needed

ppp molto preciso

Vla (snd)

Vla

change bow as needed

ppp molto preciso

adjust tuning of open strings G and C as required, use clip microphone and electronic tuning meter, cue to proceed

ad lib.

Vc (snd)

ad lib.

Vc

libero

sotto voce

mezza voce (m.v.)

ppp molto preciso

20

Cues

(SQ Vl1)

(SQ Vla)

SQ Vl1

5/3 even, clear bowing

p molto preciso

if needed, adjust G string, check fifth with D string until D's are in unison

check G tuning with SQ Vla

SQ Vl2

SQ Vla

m.v.

come prima

5/3 even, clear bowing

p molto preciso

check G tuning with SQ Vl1

SQ Vc

check SQ Vln1 G tuning

libero

Vln (snd)

Vln

Vla (snd)

Vla

bracketed comma indicates optional pauses between patterns

Vc (snd)

Vc

5/1

comma indicates a pause in playing

wait until SQ Vla has tuned and cued

poco sul pont.

libero

ord.

sotto voce (s.v.), libero

if needed, adjust C string, check open strings again: optimise unison between D's

ppp molto preciso

23

Solo, libero, ad libitum, natural series: if needed, pause on tones, adjust, repeat, freely based on the indicated melody, until the horn is comfortably tuned

(avoid 7°, bring out minor triad 10 : 12 : 15)

(avoid 5° and 10°, bring out septimal 6 : 7 : 8 : 9)

take Bb Trumpet

N Tp (2)

mezza voce (m.v.), ad lib.

bracketed comma indicates optional pauses

Cues

(Ens Vc)

11/4

(Natural Trumpet harmonics)

(Ens Vc)

C+47

A-39

SQ Vl1

SQ Vl2

SQ Vla

SQ Vc

m.v.

ppp molto preciso

Vln (snd)

Vln

ppp molto preciso

Vla (snd)

Vla

(Ens Vc)

ppp molto preciso

sotto voce poss.

ppp molto preciso

Vc (snd)

Vc

C+47

7°

A-39

come prima

11/4

echo 7° in Natural Tp

26

Cues

(SQ Vl2)

SQ Vl1

s.v. < > poco

ppp molto preciso

SQ Vl2

m.v.

5/3

p molto preciso

SQ Vla

if needed, adjust G string, check fifth with D string until D's are in unison

SQ Vc

s.v. < > poco

5/2

ppp molto preciso

even, clear bowing

Vln (snd)

Vln

11/4

s.v. m.v. ppp molto preciso

Vla (snd)

Vla

Vc (snd)

Vc

29

Cues

(SQ Vc)

(SQ Vla)

SQ Vl1

9/2

5/4

ppp molto preciso

SQ Vl2

if needed, adjust G string, check fifth with D string until D's are in unison

7/4

ppp molto preciso

SQ Vla

tune to A harmonic in Vl1

9/5

s.v. < > poco

ppp molto preciso

SQ Vc

if needed, adjust C string, check fifth with G string until G's are in unison

Vln (snd)

(SQ Vc fades)

Vln

Vla (snd)

Vla

32

SQ Vl1

SQ Vl2

optimise beating !

SQ Vla

if needed, adjust C string, check fifth with G string until G's are in unison

6/5

ppp molto preciso

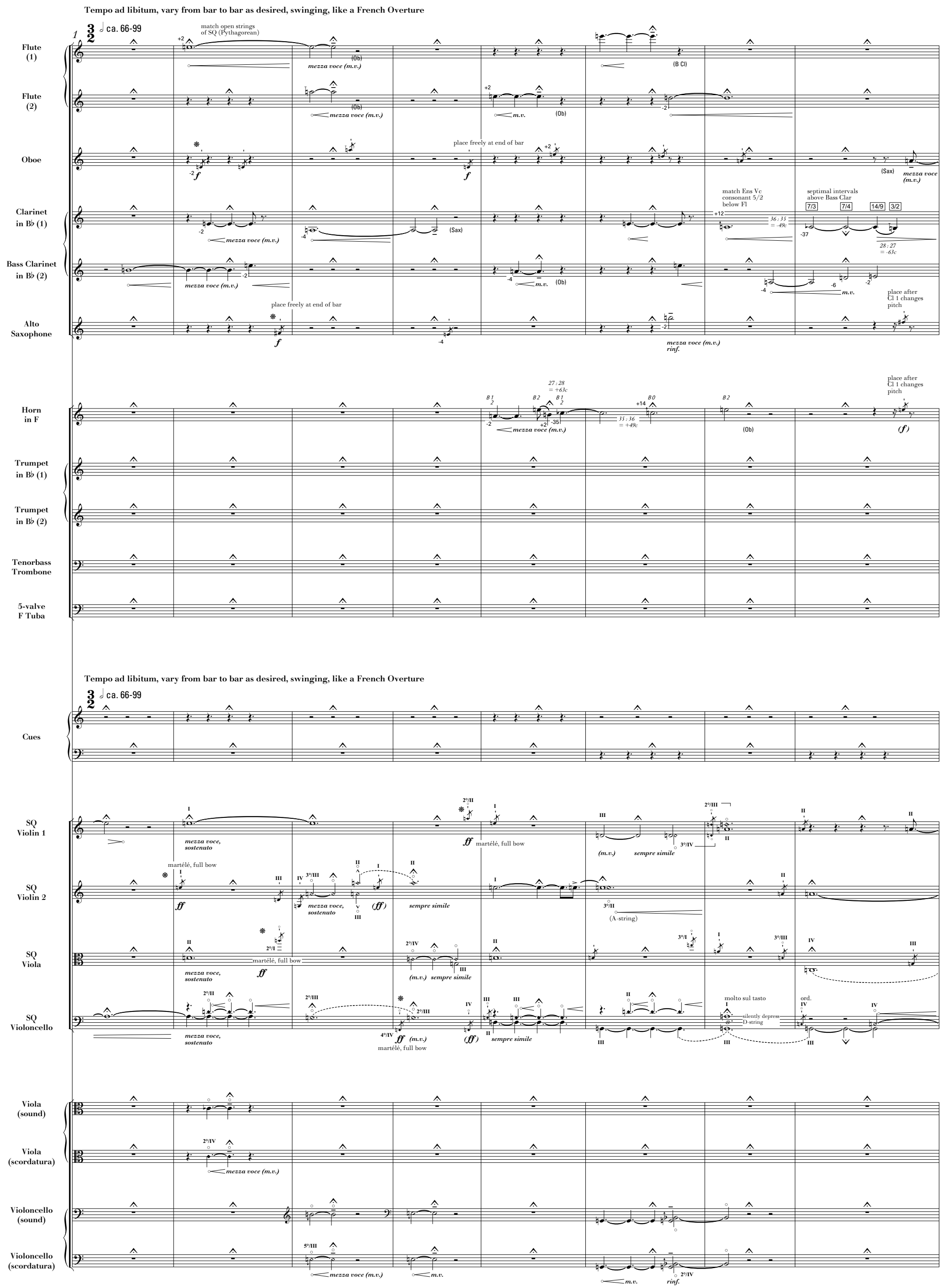
beating !

SQ Vc

s.v. < > poco

ppp molto preciso

attacca



* grace notes are not to be deliberately synchronized between the instruments: each player may place them freely at the indicated beats

9

Fl (1)

Fl (2)

Ob

B♭ Cl (1)

Bass Cl (2)

Alto Sax

Hn

B♭ Tp (1)

B♭ Tp (2)

Tb

Tba

Cues

SQ Vl1

SQ Vl2

SQ Vla

SQ Vc

Vln (snd)

Vln

Vla (snd)

Vla

Vc (snd)

Vc

m.v.

(Sax)

(f)

sempre simile

senza dim.

pp

tune consonant 5/2
above Ens Vc G

9 : 10
= +182c

5°

-18

rinf.

tune with SQ Vc, Vla

7°

27 : 28
= +63c

-37

un poco più f

F 1
2

molto sul tasto
silently press down
D- and G-strings

sotto voce

gradually
shift to open G

come prima

17

Fl (1)
Fl (2)
Ob
B♭ Cl (1)
Bass Cl (2)
Alto Sax
Hn
B♭ Tp (1)
B♭ Tp (2)
Tb
Tba
Cues
SQ Vl1
SQ Vl2
SQ Vla
SQ Vc
Vla (snd)
Vla
Vc (snd)
Vc

mezza voce (m.v.)
m.v.
(Sax)
come prima
u5
place after Cl 1 changes pitch
(Trp)
rinf.
8 : 7 = -231c
dissonant Tuba
match Tuba
(Ob)
fp
simile
match Ens Vc
15 : 14 = -119c
(keep position, play on F side)
coordinate with Tba, SQ Vl2
28 : 27 = -63c
tune with Tb
consonant to Tb dissonant to Horn
(A-string)
molto sul tasto
ord.

24

Fl (1)

Fl (2)

take Bass Flute

Ob

(Sax)

B♭ Cl (1)

Bass Cl (2)

Alto Sax

B♭ Tp (1)

tune arrow-down pitches as consonant
5th partials to SQ open strings

Pythagorean over SQ Vla C !
match Tp 2

B♭ Tp (2)

tune 7° with
Sax, SQ Vc

tune 7° with
Sax, SQ Vc

take Natural Trumpet

Cues

SQ Vl1

SQ Vl2

SQ Vla

molto sul tasto

come prima

SQ Vc

gradually
shift to open G

come prima

Vln (snd)

Vln

Vla (snd)

Vla

Vc (snd)

Vc

take Gamba

attacca

Harmonium for Claude Vivier

Joyeux

♪ = 288 (♩ = 144 | ♩. = 96)

Cues

(This staff shows the hocketing counterpoint between parts, written at sounding pitch)

SQ Violin 1

SQ Violin 2

SQ Viola

SQ Violoncello

f sonore e sostenuto possibile

(harmonics are mostly written at the nodes as diamond noteheads inflected by a small circle;
the desired partial and string are indicated above; please observe the changing nodes where possible;
double-stop harmonics generally take two stems.)

SQ Vl1

SQ Vl2

SQ Vla

SQ Vc

(match cello harmonic)

(dissonant fourth 27/20)

(match cello harmonic)

(match cello harmonic)

sim.

* this section is played on open strings and natural harmonics whenever possible, with the exception of occasional stopped pitches

43

Cues

SQ Vl1

SQ Vl2

SQ Vla

SQ Vc

sim.

55

Cues

SQ Vl1

SQ Vl2

SQ Vla

SQ Vc

(match cello)

64

Cues

SQ Vl1

SQ Vl2

SQ Vla

SQ Vc

(match cello)

* artificial harmonic

75

Cues

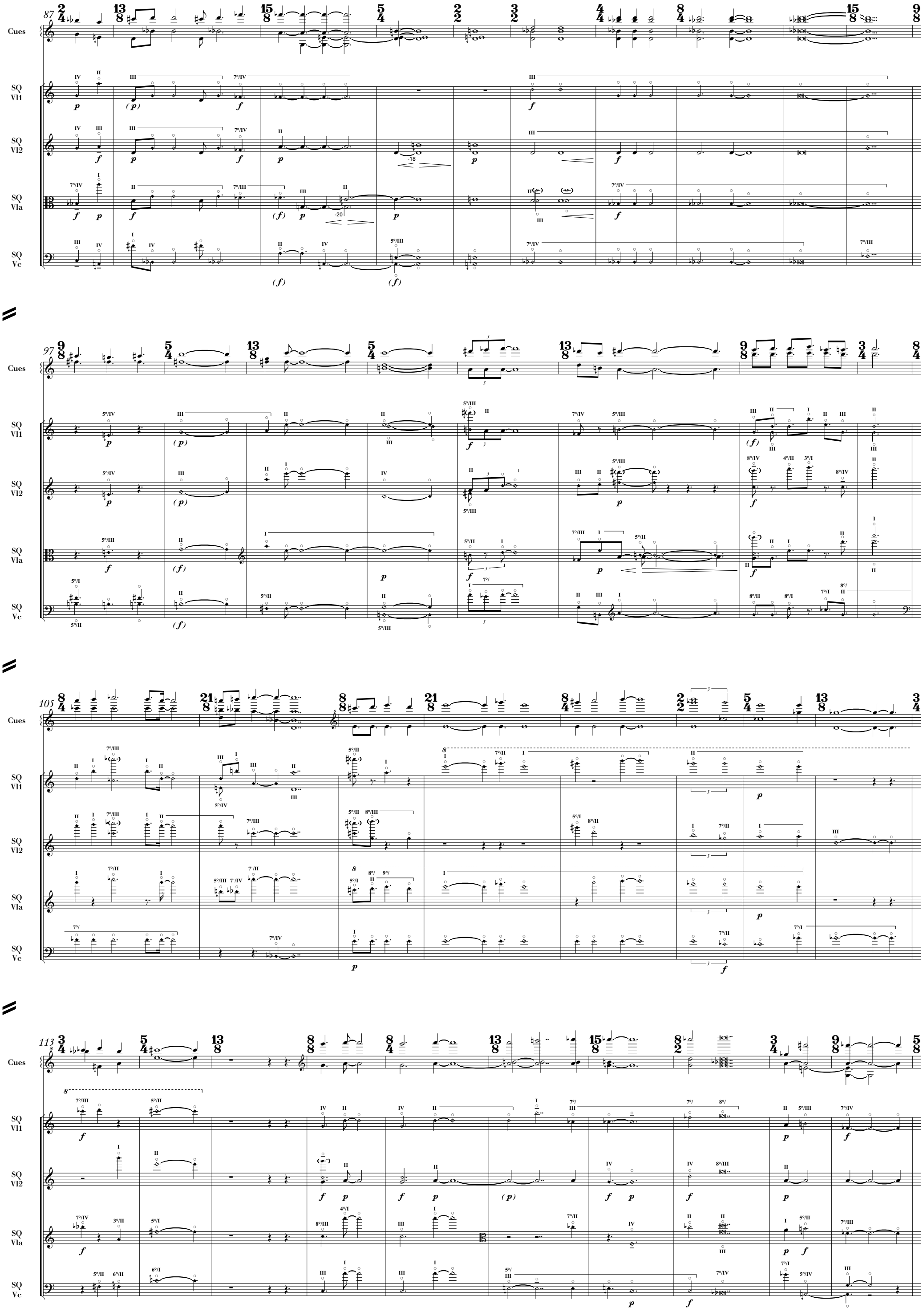
SQ Vl1

SQ Vl2

SQ Vla

SQ Vc

* double-node harmonics


87
97
105
113
Cues
SQ Vl1
SQ Vl2
SQ Vla
SQ Vc

123

Cues

SQ Vl1

SQ Vl2

SQ Vla

SQ Vc

133

Hp (snd)

Hp

mezza voce (m.v.)

Hpsd (snd)

Hpsd

(upper manual)

(lower manual)

Cues

SQ Vl1

SQ Vl2

SQ Vla

SQ Vc

Vln (snd)

Vln

con sord.

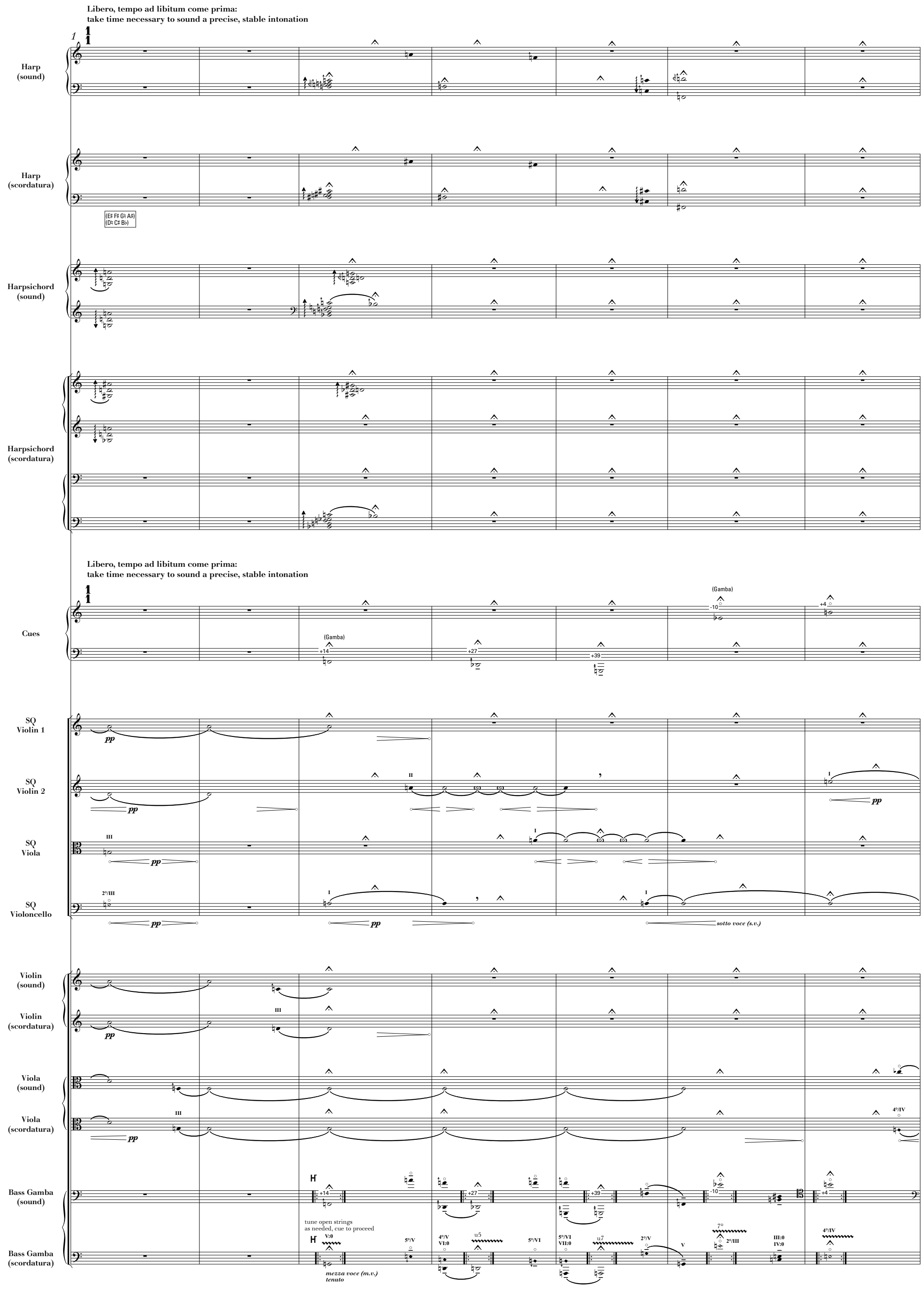
Vla (snd)

Vla

con sord.

attacca

Interlude (intonation)



8

Hp (snd)

Hp

m.v.

F♭ l.v.
damp others

sim.

E♭ F♭ G♭ A♭
D♭ C♭ (B♭)

E♯ G♯
D♯

A♯
B♯ C♯

Hpsd (snd)

Hpsd

lute stop

lute stop

r.h.

Cues

(Gamba)

22 35

SQ Vl1

II

pp

IV

s.v.

2°/III

s.v.

SQ Vl2

III

s.v.

4°/IV

s.v.

SQ Vla

5°/IV

pp

I

s.v.

2°/IV

s.v.

SQ Vc

IV

5°/IV

pp

2°/III

7°/III

s.v.

Vln (snd)

Vln

2°/IV

pp

IV

2°/I

pp

Vla (snd)

Vla

2°/IV

IV

2°/IV

pp

2°/I

pp

4°/III

sotto voce (s.v.)

Gamba (snd)

22 35

Gamba

2°/IV

II:2b

II:0

I:0

I
II

3°/II

3°/I

18

Hp (snd)

Hp

F♮ G♯ D♯ | A♯ B♯ C♯ | F♯ | F♮ | A♮ | E♭ G♮ B♮ | D♮ | F♭ | A♭ | E♮ G♭ B♭ | D♭

Hpsd (snd)

Hpsd

ord. (lute off)

ord. (lute off)

Cues

SQ Vl1

SQ Vl2

SQ Vla

SQ Vc

7°/IV

Vln (snd)

Vln

I

2°/III

II

2°/I

s.v.

Vla (snd)

Vla

I

II

2°/I

s.v.

Gamba (snd)

Gamba

V:0

pp

attacca

Cantabile ♩ = 72

Horn in F

Natural Trumpet (2)

(written at sounding pitch)

coordinate, tune with SQ Vl2

ord. (holes covered, played as 7° harmonic)

coordinate with Nat Tp

match Horn

coordinate rhythm with SQ Vla, Gamba

Glockenspiel

l.v. sempre except when indicated

Vibraphone

play durations and rests as written

Crotales

l.v. sempre except when indicated

come prima

Marimba

5 bars are retuned as natural 7° using putty or similar mass (C4, F4, G4, B♭4, D5)

Harp (sound)

Harp (scordatura)

Harmonics: in sounding staff as they sound in playing staff on the string plucked

E♯ (F♭ G♭ A♭) D♯ (C♭ B♭)

B♯ F♯ A♯ C♯ B♭ D♭ C♭

notes marked with a star are dissonant higher partials; damp these by the end of bars if they disturb the following harmony, otherwise l.v. ... ad lib.

Piano

Harpsichord (sound)

Harpsichord (scordatura)

to Piano

Cantabile ♩ = 72

Fundamentals of major triads: 1°
Common partial of minor triads: u1
Higher partials indicated by numbers (7, 11, 13)

Cues

SQ Violin 1

mezza voce (arco) c.l.b. → ord.

poco vib. (narrow)

martélé

SQ Violin 2

l.h. + pizz.

sostenuto

SQ Viola

mezza voce

SQ Violoncello

mezza voce

espr.

martélé

Violin (sound)

Violin (scordatura)

(con sord.)

coordinate with SQ Vl2

Viola (sound)

Viola (scordatura)

(con sord.)

sounding pitches at A440

Bass Gamba (sound)

Bass Gamba (scordatura)

blend in the natural 7th ...

then reveal it!

coordinate with SQ Vla

Lento e libero, sostenuto, senza tempo :
allow the sonorities to emerge and recede

9 — 10a

Bb Cl (1)
Bass Cl (2)
Hn
Tb
Glock
Vib
Crot
Mar
Hp (snd)
Hp
Pf
Hpsd (snd)
Hpsd
Cues
SQ Vl1
SQ Vl2
SQ Vla
SQ Vc
Vln (snd)
Vln
Vla (snd)
Vla
Gamba (snd)
Gamba

pp sost.
pp sost.
F 1 2
-33
Bb II
mezza voce (m.v.)
pp
coordinate with Hpsd, Mar
beating with SQ Vc
pp
(if needed)
coordinate with Hpsd, Vibr
pp
coordinate with Hpsd
beating slow with Strings
beating slow with Strings
pp
to Hpsd
beating with SQ Vlc

Lento e libero, sostenuto, senza tempo :
allow the sonorities to emerge and recede

p m.v.
keep the pitch!
beating slow with Strings
no beating (slightly lower pitch)
pp sostenuto
225 : 224 = -8c
p m.v.
p poco
change bow ad lib.
slight beating with Ens Vla
no beating (slightly lower pitch)
pp sostenuto
225 : 224 = -8c
change bow ad lib.
slight beating with Ens Vla
no beating (slightly lower pitch)
pp sostenuto
225 : 224 = -8c
p
pp sostenuto
beating fast with Vibraphone, Ens Vl
keep the pitch!
beating slow with Strings
no beating (slightly lower pitch)
pp sostenuto
225 : 224 = -8c
beating with SQ Vlc
44 : 45 = +39c
bend slightly upward starting from nut, tune with SQ Vl2
pp sostenuto
2°/IV
4°/IV
2°/IV
4°/II
4°/IV
2°/IV
p
pp sostenuto
pp sost.
III:0
II:9a
7/3
p

10b

Tempo primo

5/2 ♩ = 72

3/2

Fl (1)

Bass Fl (2)

B♭ Cl (1)

Bass Cl (2)

Hn

B♭ Tp (1)

N Tp (2)

Tb

Tba

Vib

Mar

Hp (snd)

Hp

Hpsd (snd)

Hpsd

Cues

SQ Vl1

SQ Vl2

SQ Vla

SQ Vc

Vln (snd)

Vln

Vla (snd)

Vla

pp sostenuto

pp

mezza voce (m.v.)

poco f

tune P4 with Trombone, (4) dissonant to Tuba

63 : 64 = +27c

(switch to F-side, pitch should be possible with minimal or no slide adjustment)

dissonant to Trp, Trb

coordinate with Hpsd, SQ Vla

coordinate with SQ Vla

ppp

27 : 28 = +63c

24 : 25 = +71c

f

p

poco f

Tempo primo

5/2 ♩ = 72

3/2

13

Fl (1)
Bass Fl (2)
Ob
B♭ Cl (1)
Bass Cl (2)
Alto Sax
Hn
N Tp (2)
Tb
Tba
Vib
Mar
Hp (snd)
Hp
Pf
Hpsd (snd)
Hpsd
Cues
SQ Vl1
SQ Vl2
SQ Vla
SQ Vc
Vln (snd)
Vln
Vla (snd)
Vla
Gamba (snd)
Gamba

coordinate with Hp, Gamba
match SQ Vlc
36 : 35 = -49c
end with Hn
(SQ Vl1)
end with Cl
senza cresc.
coordinate with Ens Vla, Tp, Hn
match SQ Vc
tune with SQ, Ob
coordinate with Harp, SQ Vl1
continue triplets of SQ Vl2
coordinate with Gamba
coordinate with Marimba, SQ Vl1
to Piano
coordinate with SQ Vl1
poco vibr., come prima
m.v. espr.
poco vibr. (narrow)
coordinate with SQ Vl1
bend very slightly upward from the nut
99 : 100 = +17c
match SQ Vlns, Gamba
keep the pitch
sempre sul I
dissonant to SQ Vlc
+43c
P5 above SQ Vlc
keep the pitch
mezza voce (m.v.)

19

Fl (1)
Bass Fl (2)
Ob
Bass Cl (2)
Alto Sax
Hn
B♭ Tp (1)
N Tp (2)
Tb
Tba
Vib
Mar
Hp (snd)
Hp
Pf
Hpsd (snd)
Hpsd
Cues
SQ Vl1
SQ Vl2
SQ Vla
SQ Vc
Vln (snd)
Vln
Vla (snd)
Vla
Gamba (snd)
Gamba

match Ens Vl
coordinate with SQ Vc, Pf
coordinate with SQ Vlc
to Hpsd
coordinate, tune with SQ Vla
coordinate with Tb
coordinate with Tp 1
match SQ Vc
mezza voce (m.v.)
match SQ Vl2
tune consonant to Gamba, SQ Vla
match Gamba, consonant with SQ Vl1
keep the pitch
tune 4/5 below SQ Vl1
tune with Gamba, SQ Vl2
(dissonant to SQ Vl1)
(consonant)

24

B♭ Cl (1)
Hn
B♭ Tp (1)
N Tp (2)
Tba
Glock
Vib
Crot
Mar
Hp (snd)
Hp
Hpsd (snd)
Hpsd
Cues
SQ Vl1
SQ Vl2
SQ Vla
SQ Vc
Vln (snd)
Vln
Vla (snd)
Vla
Gamba (snd)
Gamba

tune with SQ Vlc
match Tp 1
ord.
to Piano
diesis 128 : 125 = -41c
l.h. pizz.
fast vibr.
slow bow
espr.
sost.
beating with SQ Vl2
same sounding pitch, three octaves lower
match SQ Vl2
martelé (from the string)
dissonant aug. 5th
sempre sul II
support SQ Vla Solo
transition gradually
mezza voce (m.v.)

29

Fl (1)
Bass Fl (2)
Bass Cl (2)
Alto Sax
Hn
B♭ Tp (1)
N Tp (2)
Tba
Vib
Mar
Hp (snd)
Hp
Pf
Cues
SQ Vl1
SQ Vl2
SQ Vla
SQ Vc
Vln (snd)
Vln
Vla (snd)
Vla
Gamba (snd)
Gamba

Blues third! match Sax
Blues third!
tune consonant with SQ Vla
match Ens Vln, Vla, then bend down
match SQ Vla, Vc
tune 5/4 below N Tp
match Pf, Alto Sax
coordinate with Trp
coordinate with SQ Vla
poco f
diminuendo
(ossia: upper 2 notes only)
dissonant 7th
tune to SQ Vla, Gamba
tune to SQ Vl2, Gamba
tune to SQ Vc
tune 8ve with open string
sotto voce
rinf.

35

Fl (1)

Bass Fl (2)

Ob

B♭ Cl (1)

Hn

B♭ Tp (1)

Tba

Glock

Vib

Crot

Mar

Hp (snd)

Hp

Pf

Cues

SQ Vl1

SQ Vl2

SQ Vla

SQ Vc

Vln (snd)

Vln

Gamba (snd)

Gamba

(tune as 5/2 above Pf, Tuba)

5° of u11, slightly bend up, then match SQ

balance with SQ Vl2

coordinate with SQ Vl1

tune with Oboe, Horn

match Pf

coordinate with SQ Vl2

to Hpsd

40

B♭ Cl (1)
Bass Cl (2)
Alto Sax
Hn
Tb
Vib
Mar
Hp (snd)
Hp
Hpsd (snd)
Hpsd
Cues
SQ Vl1
SQ Vl2
SQ Vla
SQ Vc
Vln (snd)
Vln
Vla (snd)
Vla
Gamba (snd)
Gamba

(help to articulate small comma step in SQ Vl2)
81 : 80 = -22c
16 : 15 = -112c
match A in SQ Vc, Harp
tune to Horn
dissonant!
80 : 81 = +22c
(clear previous G)
m.v.
coordinate with SQ Vc
coordinate with SQ Vlns
coordinate with SQ Vl1
sul tasto
molto sul tasto
(slow)
ord.
l.h. pizz.
poco
coordinate with SQ Vl2 to obtain pitch, it is enough to change the finger from harmonic pressure to stopped

46

Fl (1)
Bass Fl (2)
Ob
B♭ Cl (1)
Bass Cl (2)
Alto Sax
B♭ Tp (1)
N Tp (2)
Tb
Glock
Vib
Crot
Mar
Hp (snd)
Hp
Pf
Hpsd (snd)
Hpsd
Cues
SQ Vl1
SQ Vl2
SQ Vla
SQ Vc
Vln (snd)
Vln
Vla (snd)
Vla
Gamba (snd)
Gamba

sfp
m.v.
(m.v.)
poco f
pp (senza cresc.)
mezza voce (m.v.)
rinf.
p
coordinate with SQ Vl1
ord. (lip 9. partial 15° slightly down)
coordinate with Tp, SQ Vl2
keep position
keep position (F IV raised by a comma)
match SQ Vc
coordinate with Harp
coordinate with Ens Vln
coordinate with SQ Vla
coordinate with Marimba
to Piano
strike the string!
fast ricochet
sonore
ord.
pizz.
arco
(unison with open)
sfz
f
fp
sfp
pp

50

Fl (1)

Bass Fl (2)

coordinate wih Pf

175 : 176 = +10c

sotto voce

B♭ Cl (1)

Alto Sax

coordinate with SQ Vlc

m.v.

sotto voce

B♭ Tp (1)

Tb

match SQ Vla

end with Sax

raise slide position slightly by one more comma-size step, as before 80 : 81=+22c

match SQ Vc

sotto voce

Vib

coordinate wih Pf

m.v.

Hp (snd)

Hp

Pf

coordinate wih SQ Vl2 pizz.

to Hpsd

m.v.

Cues

(SQ Vl2 ricochet)

SQ Vl1

flautando

ord.

poco f

SQ Vl2

fast ricochet

sfz

poco f

SQ Vla

espr.

SQ Vc

(senza dim.)

m.v.

crescendo

Vln (snd)

Vln

tune with SQ Vl1 (major triad)

tune with SQ Vl1 (minor triad) match SQ Vla

m.v.

gradually stopped

pp

Vla (snd)

Vla

gradually stopped and slightly lower

pp

28 : 27 = -63c

tune with : SQ Vc, Gamba

Gamba (snd)

Gamba

m.v.

pp

poco f

56

Bass Fl (2)

B♭ Cl (1)

Bass Cl (2)

N Tp (2)

Tb

Tba

Vib

Mar

Hp (snd)

Hp

Hpsd (snd)

Hpsd

Cues

SQ Vl1

SQ Vl2

SQ Vla

SQ Vc

Vln (snd)

Vln

Vla (snd)

Vla

Gamba (snd)

Gamba

adjust to Gamba

ossia 8va if extended bass range not available

to Piano

slow bow

tune with SQ Vl2

tune with Gamba, SQ Vla

SQ Vl2

dissonant to SQ Vlc

dissonant to SQ Vla, Vl.1

coordinate with SQ Vl2

63

Fl (1)
Bass Fl (2)
B♭ Cl (1)
Bass Cl (2)
Tb
Tba
Vib
Hp (snd)
Hp
Pf
Hpsd (snd)
Hpsd
Cues
SQ Vl1
SQ Vl2
SQ Vla
SQ Vc
Vln (snd)
Vln
Vla (snd)
Vla
Gamba (snd)
Gamba

sotto voce
match Cl 1
coordinate with Pf, Hp
match SQ Vlc
1° (fundamental pitch)
tune with SQ, Gamba
use change of fingering to articulate very small pitch difference
coordinate with Hp
coordinate with Pf
to Hpsd
to Piano
coordinate with SQ Vla
(artificial harmonic cents = sounding pitch deviation)
change bow ad lib.

69

Fl (1)

take Piccolo

Bass Cl (2)

sotto voce

N Tp (2)

coordinate with Gamba
tune with SQ Vc, Tuba

sotto voce sostenuto

Tb

set position between FI and FII

Tba

u5 to Ens Vln

tune with SQ Vc, Trp

sotto voce

very slight pitch change

Vib

take bow

Crot

take bow

Mar

pp

Hp (snd)

Hp

coordinate with SQ Vl1 ricochet

poco f

Cues

SQ Vl1

fast ricochet

poco f

diminuendo

port.

(dim.)

SQ Vl2

SQ Vla

pp sotto voce

SQ Vc

diminuendo

(dim.)

Vln (snd)

fast ricochet, raise pitch gradually from nut

tune to SQ Vl1

Vln

m.v.

Gamba (snd)

coordinate with SQ Vla

Gamba

diminuendo

Un poco largo

76 ♩ = 57.6

Picc (1)

tune with Clar

tune with Pf, Ens Vl

11° begin freely during fermata

sotto voce

Bass Fl (2)

match Ob

match Sax

Ob

match Bass Fl

B♭ Cl (1)

Alto Sax

tune with Picc

fade out freely

(Hn)

Hn

tune to Tb, Tuba, SQ Vc

Tb

tune to SQ Vc, Tuba

Tba

tune to SQ Vc, Tb

Glock

Vib

arco

ord.

place freely after Piano

Crot

Mar

Hp (snd)

Hp

coordinate with SQ Vla harmonic

coordinate with SQ Vl2

pp

Pf

play after SQ Vl1 has emerged dal niente

gentle pedal lift

Un poco largo

♩ = 57.6

Cues

colla parte: allow for the free repetitions and independent flowing of parts in the SQ

(SQ Vl2)

SQ Vl1

libero

in tempo

SQ Vl2

SQ Vla

change bow as needed

poco f e sempre sostenuto

SQ Vc

(diminuendo on F only)

(dim.) sotto voce

Vln (snd)

Vln

molto sul tasto

poco sul pont.

sotto voce poss.

Vla (snd)

Vla

poco sul tasto

Gamba (snd)

Gamba

sotto voce sempre

78

Bass Fl (2)
sotto voce

Alto Sax
match Bass Fl
u7
sotto voce

Hn
match SQ Vl2
tune to Tuba, tempo libero
tune to Tb, SQ Vc, sustain past Tp, end freely or sustain ad lib.

B♭ Tp (1)
(Hn)
tune to Trb, SQ, tempo libero
(Tb)
sotto voce
end freely during fermata

Tb
continue in tune with SQ (Tuba dissonant)
end freely during fermata

Tba
match Pf
u11

Hp (snd)

Hp

Pf
u11

Cues
u11

SQ Vl1
libero
ppp

SQ Vl2
libero
ppp
rinf.

SQ Vla
place freely

SQ Vc

Vla (snd)
u7
molto sul tasto

Vla

Gamba (snd)

Gamba

79

Picc (1)

Bass Fl (2)

Ob

B♭ Cl (1)

Bass Cl (2)

Alto Sax

Hn

B♭ Tp (1)

Tb

Tba

Glock

Vib

Crot

Mar

Pf

Cues

SQ Vl1

SQ Vl2

SQ Vla

SQ Vc

Gamba (snd)

Gamba

tune with Sax
11°
sotto voce
match Clar
120 : 121
= +14c
+14
tune 5/2
below Oboe
match Sax
11°
sotto voce
match Pf, Bass Cl
u11
sotto voce
(s.v.)
match Pf
u11
sotto voce
5° of u11
-14
begin as 5/4 above Cl 1,
bend up slightly to tempered
match Bass Cl,
tune with Picc
11°
F 3
4
F
4
B 3
F
4
-35
-49
-14
-49
echo Tp pitches
B 3
+2
-14
-49
tempo libero,
proceed freely
-49
tempo libero,
proceed freely
tune to Bass Cl
2
3
0
+2
-14
1 ♯
1 ♯
3
1 ♯
1 ♯
3 ↓
1 ♯
1 ♯
3 ↓
1 ♯
3 ↓
-49
repeat ad lib., gradually extend
3. valve slide to match pitch
Note: cents for transposing
instruments are given in
relation to the nearest
SOUNDING pitch, as
read on a tuning meter
tune to Tb
-51
Ab+35
-49
-51
tune to Tb
1
2
3
-49
sotto voce
(arco)
sotto voce
sotto voce
11°
fade ad lib.
sotto
voce
u11
sotto voce
fade ad lib.
u1
11°
u11
u5 (of 11°)
(SQ Vl1)
simile (tempo libero)
I
-35
-51
-49
poco f
rinf.
-35
-65
m.v.
simile (tempo libero)
-33
-51
IV
mp
pp
-35
poco f
-65
upbeat
in tempo
ppp
-35
-49
upbeat
in tempo,
after fermata
sfz
I:4a
(remain sotto voce)

80

Picc (1)

Bass Fl (2)

fade freely

11°

match Pf, Ens Vl

sotto voce

Hn

match, continue Tb

-47 sotto voce

Bb+39

(Harp)

Bb Tp (1)

sustain ad lib.

tune 4/3 with N Trp

Ab+35

sotto voce

(keep pitch, ignore SQ Vla D)

N Tp (2)

tune to Tb, SQ Vl1

Eb+37

pp

sotto voce

tune P5 with Horn

Tb

tune to Tuba

-51

-49

Ab+35

-47

Tba

-51

-49

Vib

11° (arco)

sotto voce

Crot

11° arco

sotto voce

Hp (snd)

Hp

pp

Pf

sotto voce

Cues

(SQ Vla)

u1

SQ Vl1

rinf.

ppp

molto tasto

ord.

SQ Vl2

p

ppp

SQ Vla

SQ Vc

Vln (snd)

Vln

ord.

fast ricochet

sul tasto, flaut.

poco f

Gamba (snd)

Gamba

I:6a

82

Picc (1)

Bass Fl (2)

take Alto Fl

B♭ Cl (1)

11° +4 5° +22 port.

bend up to consonance with Brass, beating with Vibes

fade freely

Hn

Bb+39 -45

B♭ Tp (1)

Ab+35

take Piccolo Tp

N Tp (2)

tune to Horn, Tp

Eb +37 sotto voce

tune P4 with Horn, sustain longer (one comma higher than previous Tp 1 A)

-43

Glock

coordinate with Harp

sotto voce

Vib

(arco)

sotto voce

Hp (snd)

coordinate with Glockenspiel

Hp

Pf

to Hpsd

Hpsd (snd)

Hpsd

beating intonation !

Cues

11° 1°

beating

SQ Vl1

lower E (5 commas down) is dissonant (27/20) with Vln II A !

-61 -47 -45 -63 -41

poco f sfz rinf.

SQ Vl2

-61 -47 -45 -43 rinf.

SQ Vla

-59

SQ Vc

Vln (snd)

Vln

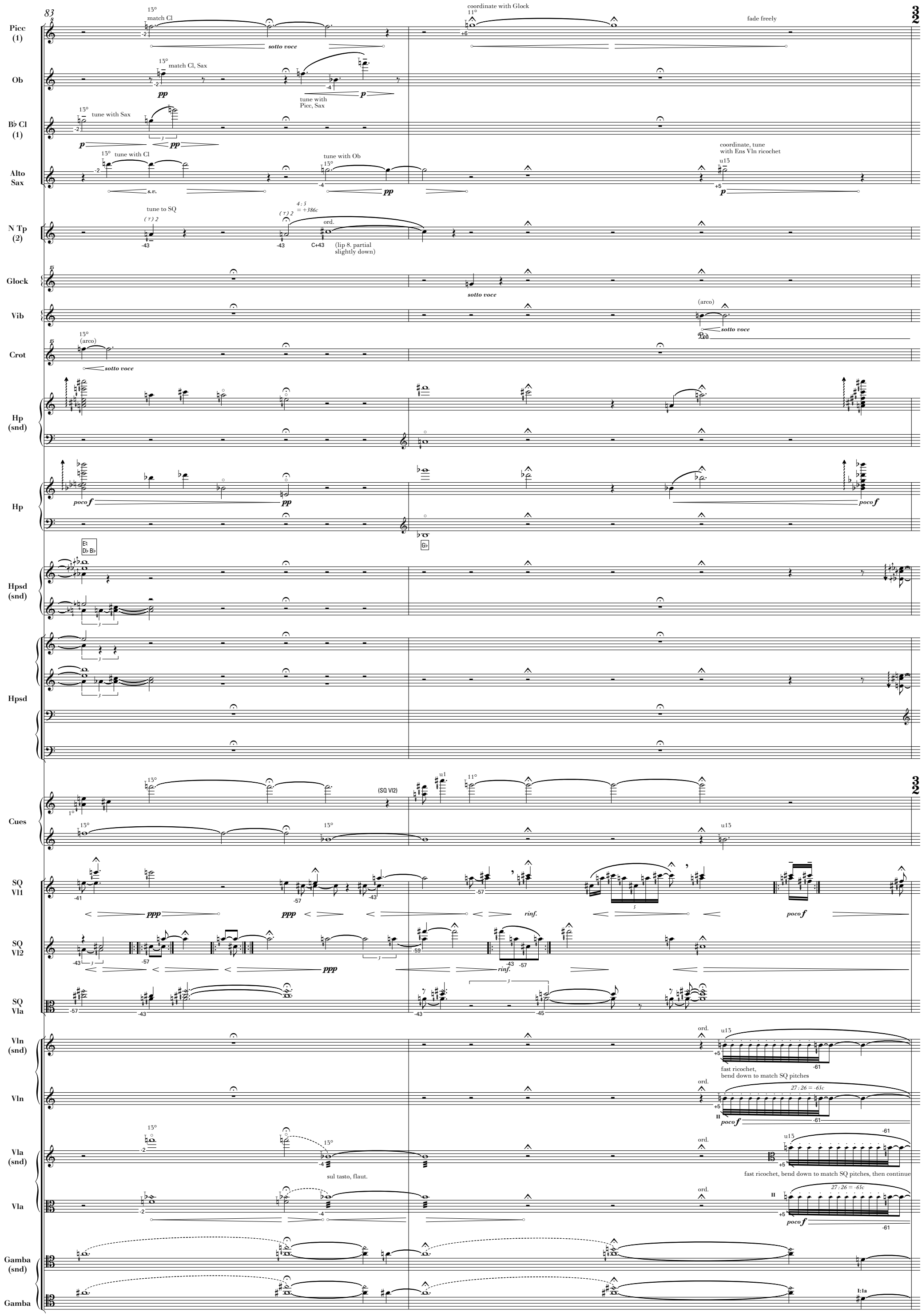
end with Picc

sotto voce

Gamba (snd)

Gamba

I:8a


83
Picc (1)
13°
match Cl
sotto voce
coordinate with Glock
11°
fade freely
Ob
13°
match Cl, Sax
pp
tune with Picc, Sax
p
B♭ Cl (1)
13°
tune with Sax
p
pp
Alto Sax
13°
tune with Cl
s.v.
tune with Ob
13°
pp
coordinate, tune with Ens Vln ricochet
u13
p
N Tp (2)
tune to SQ
(T) 2
-43
4 : 5 = +386c
(T) 2
-43
ord.
C+43
(lip 8. partial slightly down)
Glock
sotto voce
Vib
(arco)
sotto voce
Crot
13°
(arco)
sotto voce
Hp (snd)
Hp
poco f
pp
poco f
Hpsd (snd)
Hpsd
Cues
13°
(SQ Vl2)
u1
11°
13°
13°
u13
SQ Vl1
ppp
ppp
rinf.
poco f
SQ Vl2
ppp
rinf.
SQ Vla
Vln (snd)
ord.
u13
fast ricochet, bend down to match SQ pitches
Vln
ord.
27 : 26 = -65c
poco f
Vla (snd)
13°
13°
sul tasto, flaut.
ord.
u13
fast ricochet, bend down to match SQ pitches, then continue
Vla
ord.
27 : 26 = -65c
poco f
Gamba (snd)
Gamba
I:1a

85

Picc (1)
Alto Fl (2)
B♭ Cl (1)
Bass Cl (2)
Hn
Glock
Vib
Crot
Mar
Hp (snd)
Hp
Hpsd (snd)
Hpsd
Cues
SQ Vl1
SQ Vl2
SQ Vla
SQ Vc
Vln (snd)
Vln
Vla (snd)
Vla
Gamba (snd)
Gamba

sotto voce
match Ens Vln
5° of u13
pp
take Bass Cl
fade freely
dissonant to SQ
u13
fp
(arco)
ord.
5° of u13
coordinate with SQ Vla
cantabile
D: B:
E♭ G:
beating intonation !
(in tempo)
in tempo
inf.
m.v.
poco f
cantabile, come prima
senza gliss. (beating with Ens. Vla)
40 : 39 = -44c
tune with SQ, Gamba
sotto voce
port.
p sostenuto
I:5°/1a
I:6a
I:4b
I:2b
I:1a
I:2b
m.v.

89

Alto Fl (2)

u13 +14 -8 match Ens Vla u5 -29 u7 +8 u5 -12

Hn

consonant to SQ -29 -27 -43 m.v. -41 fp

N Tp (2)

match Horn intonation p -43 match SQ intonation -43 5:6 = +316c match SQ and Horn -27 m.v. ord. G+45 (lip 6. partial slightly down) fp

Vib

Mar

pp

Hp (snd)

Hp

poco f m.v.

B♭ E♭ D♭ G♯ B♯

Hpsd (snd)

Hpsd

beating intonation !

Cues

u1 u13 u5 u7 u5

SQ Vl1

-45 -29 6:5 -27 -41 -25 -39 poco f -55

SQ Vl2

-45 -43 -27 -25 -41 f -39

SQ Vla

-43 -45 IV -55

SQ Vc

-43 -41 -25 -55

Vln (snd)

1/1 port. port. -43 -41 C +43 just above the nut

Vln

1/1 beating match SQ Vl2, Vc pp m.v. 5/3 match SQ Vlns f m.v.

Vla (snd)

-29 -41 D+39 -53

Vla

-43c 8/3 16 : 15 = -112c 5/2 15 : 14 = -119c 7/3 pp m.v. tune consonant with open C-string f slightly higher (+8c) than the previous septimal sounding Eb, P4 below pizz. note !, tune with SQ Vlc -53 m.v.

L'istesso tempo ma giusto, scorrevole

93

Alto Fl (2)

Ob

Bass Cl (1)

Alto Sax

echo Alto Fl, Mar

N Tp (2)

match SQ Vlns

(lip 8. partial slightly down)

Vib

(ord.)

Mar

Hp (snd)

Hp

Hpsd (snd)

Hpsd

overlap tones ad lib.

L'istesso tempo ma giusto, scorrevole

Cues

SQ Vl1

SQ Vl2

SQ Vla

SQ Vc

G# tacet ad lib.

Vln (snd)

Vln

match SQ Vl2

Vla (snd)

coordinate with SQ Vlc

Vla

Gamba (snd)

Gamba

98

Ob

Bass Cl (1)

Bass Cl (2)

Alto Sax

N Tp (2)

Vib

Crot

Mar

Hp (snd)

Hp

Hpsd (snd)

Hpsd

Cues

SQ Vl1

SQ Vl2

SQ Vla

SQ Vc

Vln (snd)

Vln

Vla (snd)

Vla

Gamba (snd)

Gamba

match Gamba, SQ

Slightly large semitone
+114c (Apotome)

Wholetone
+202c

ossia 8va if extended bass range is not available

enharmonically the same pitch !

21 : 20
= -84c

enharmonically
the same pitch !

match SQ intonation

change of spelling,
enharmonically the same pitch !

tune 5/3 above
Alto Sax

5 : 4
= -386c

establish rhythm of SQ Vl2
quintuplet that follows!

enharmonic exchange by a schisma (-2c)

poco f sostenuto

(Hpsd)

strike the string!

15 : 16
= +112c

fast ricochet, begin pitched slightly above nut
and bend down to open string !

match C
of SQ Vla

open !

match C
of Ens Vln

open !

same sounding pitch

* B natural is one schisma (circa 2¢) higher than
C flat one comma raised (almost the same pitch)

Tempo primo, cantabile

103 ♩ = 72

Picc (1)

Ob

Bass Cl (1)

Alto Sax

Vib

Crot

Mar

Hp (snd)

Hp

Hpsd (snd)

Hpsd

Cues

SQ Vl1

SQ Vl2

SQ Vla

SQ Vc

Vln (snd)

Vln

Vla (snd)

Vla

Gamba (snd)

Gamba

match Picc

match Ob

coordinate with SQ Vl1

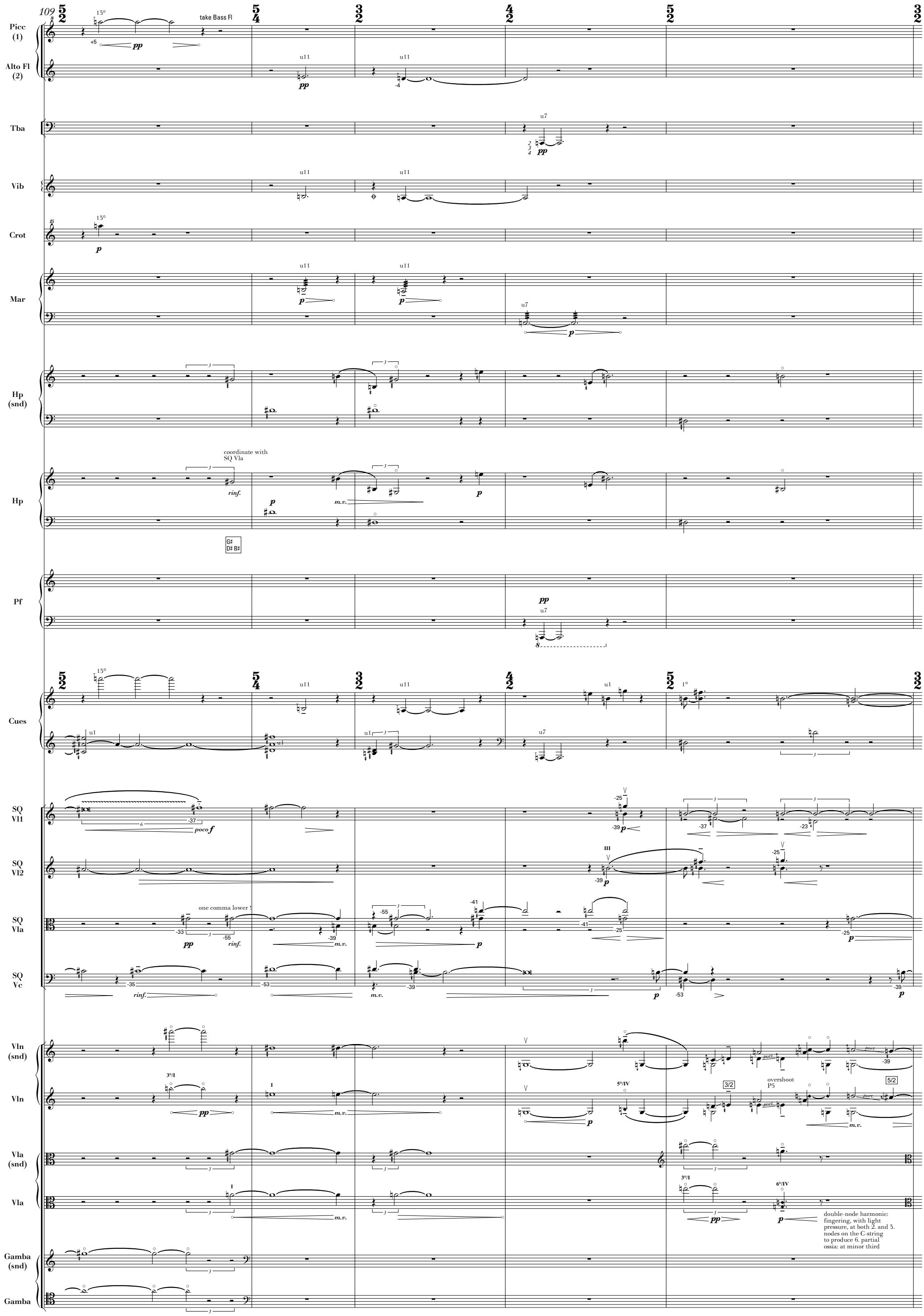
to Piano

raise slightly at nut ! match SQ Vla

tune with Gamba

match SQ Vla, Gamba

24 : 25 = +71c


109
Picc (1)
Alto Fl (2)
take Bass Fl
Tba
Vib
Crot
Mar
Hp (snd)
Hp
coordinate with SQ Vla
rinf.
m.v.
Pf
Cues
SQ Vl1
SQ Vl2
SQ Vla
one comma lower !
SQ Vc
Vln (snd)
Vln
Vla (snd)
Vla
double-node harmonic: fingering, with light pressure, at both 2. and 3. nodes on the C-string to produce 6. partial
ossia: at minor third
Gamba (snd)
Gamba

114

Alto Fl (2)

p

tune consonant with SQ

65 : 64 = -27c

5 : 4 = -386c

224 : 225 = +8c

15 : 14 = -119c

Mar

coordinate with Ens Vla

poco f

Hp (snd)

Hp

f p

poco f

Pf

coordinate with Alto Fl

sotto voce

Cues

SQ Vl1

pp espr.

SQ Vl2

pp espr.

SQ Vla

poco f

p pp pp

SQ Vc

poco f

Vln (snd)

Vln

poco f

pp

Vla (snd)

Vla

poco f

tune P4 below III then P5 above IV

pp

consonant with SQ Vl2, Vla

65 : 64 = -27c

Gamba (snd)

Gamba

pp

119

Bass Fl (1)

Alto Fl (2)

64 : 65 = +27c

Mar

Hp (snd)

Hp

coordinate with SQ Vl1

coordinate with SQ Vc

Pf

to Hpsd

sotto voce

Hpsd (snd)

Hpsd

coordinate with SQ Vla, Vl2

Cues

SQ Vl1

SQ Vl2

SQ Vla

SQ Vc

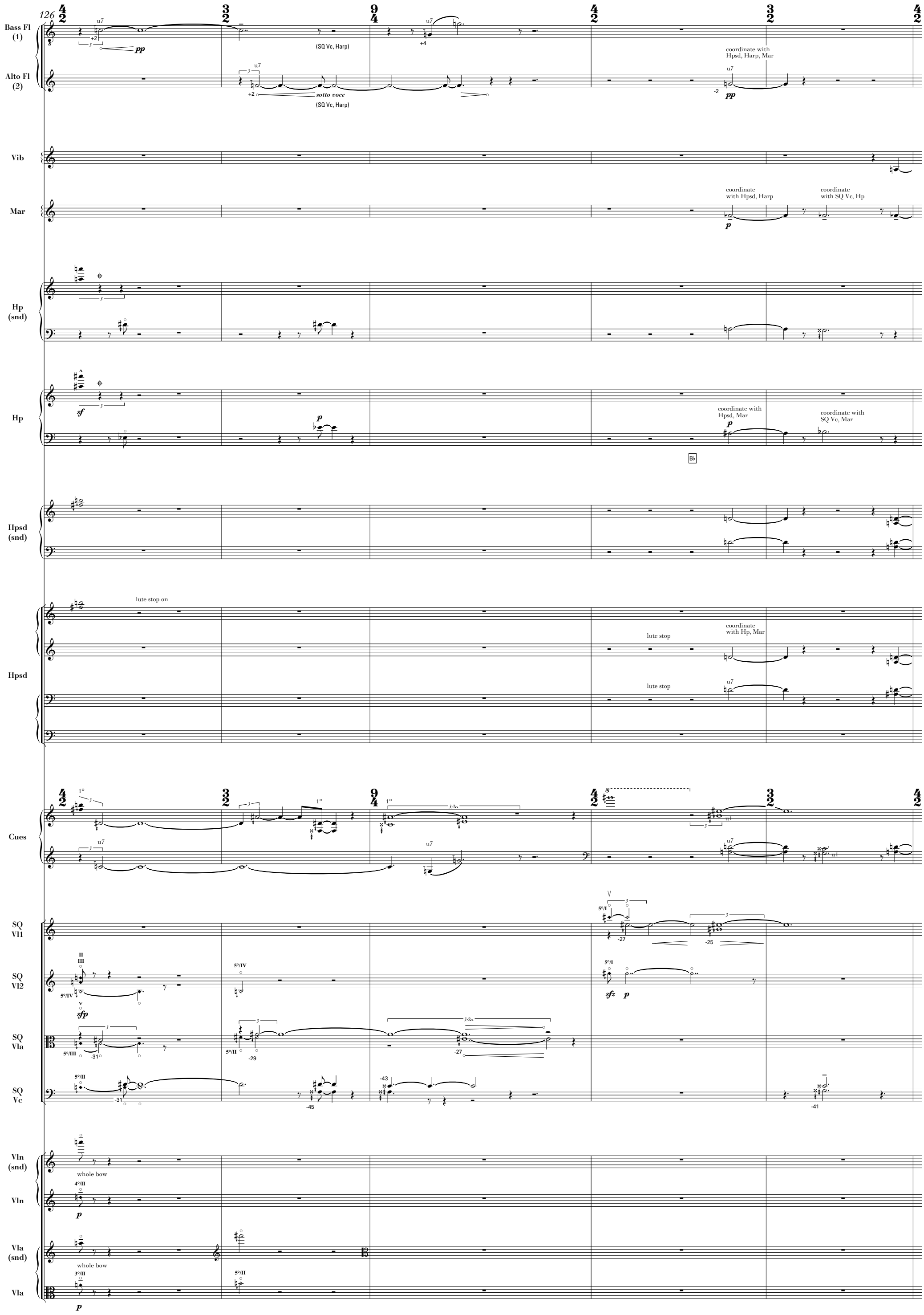
Vla (snd)

Vla

coordinate with SQ Vlc

Gamba (snd)

Gamba


126
Bass Fl (1)
Alto Fl (2)
(SQ Vc, Harp)
sotto voce
(SQ Vc, Harp)
coordinate with Hpsd, Harp, Mar
Vib
Mar
coordinate with Hpsd, Harp
coordinate with SQ Vc, Hp
Hp (snd)
Hp
coordinate with Hpsd, Mar
coordinate with SQ Vc, Mar
Hpsd (snd)
Hpsd
lute stop on
lute stop
coordinate with Hp, Mar
lute stop
Cues
SQ Vl1
SQ Vl2
SQ Vla
SQ Vc
Vln (snd)
whole bow
Vln
Vla (snd)
whole bow
Vla

131

Bass Fl (1)

match SQ Vl2

pp

Ob

pp

Vib

Mar

Hp (snd)

Hp

pp

Hpsd (snd)

Hpsd

lute stop off

lute stop off

Cues

SQ Vl1

SQ Vl2

SQ Vla

SQ Vc

sfz p

Vla (snd)

port.

match SQ Vla

Vla

Gamba (snd)

Gamba

p

136

Bass Fl (1)
Alto Fl (2)
Ob
Vib
Hp (snd)
Hp
Hpsd (snd)
Hpsd
Cues
SQ Vl1
SQ Vl2
SQ Vla
SQ Vc
Vln (snd)
Vln
Vla (snd)
Vla
Gamba (snd)
Gamba

coordinate with Gamba
take Flute
coordinate with Bass Fl
(F major !)
match Ens Vl

141

224 : 225
= +8c

Alto Fl (2)

port.

Bass Cl (1)

take Clarinet

Vib

Mar

u13

Hp (snd)

Hp

E♭ F♭ A♭

Hpsd (snd)

Hpsd

Cues

SQ Vl1

lower Db by one comma
tune 5/3 above SQ Vc

c.l.b. → ord.

SQ Vl2

SQ Vla

come prima

SQ Vc

Vln (snd)

Vln

press down and slightly raise
to make major triad with SQ

Vla (snd)

Vla

Gamba (snd)

Gamba

146

Alto Fl (2)

take Flute

Glock

pp

Vib

Mar

sotto voce

Hp (snd)

Hp

mute the 2 A♭s

E♯ G♭

A♯

Hpsd (snd)

Hpsd

Cues

SQ Vl1

change gradually to harmonic

SQ Vl2

sfz

p

SQ Vla

sfz

SQ Vc

sfz *p*

Vln (snd)

Vln

p

via sord.

Vla (snd)

Vla

sotto voce

Gamba (snd)

Gamba

same sounding pitch

take Cello

Trill flowers fell

2 ca. 18-28 | 4 | 2

Flute (1)
Flute (2)
Oboe
Clarinet in B♭ (1)
Clarinet in B♭ (2)
Alto Saxophone
Horn in F
Piccolo Trumpet in B♭ (1)
Natural Trumpet (2)
Tenorbass Trombone
5-valve F Tuba
Harp (sound)
Harp (scordatura)
Harpsichord (sound)
Harpsichord (scordatura)

match Cl, N Tp
mezza voce (m.v.)
match Ob, N Tp
mezza voce (m.v.)
poco f
B0 (sempre)
match Ob, Cl

2 ca. 18-28 | 4 | 2

Cues
SQ Violin 1
SQ Violin 2
SQ Viola
SQ Violoncello
Violin (sound)
Violin (scordatura)
Viola (sound)
Viola (scordatura)
Violoncello (sound)
Violoncello (scordatura)

con sord.
pp sotto voce
poco f
bow changes ad lib.
senza sord.

Fl (1)
Fl (2)
Ob
B♭ Cl (1)
B♭ Cl (2)
Alto Sax
Hn
Picc Tp (1)
N Tp (2)
Tb
Tba
Hp (snd)
Hp
Hpsd (snd)
Hpsd
Cues
SQ Vl1
SQ Vl2
SQ Vla
SQ Vc
Vln (snd)
Vln
Vla (snd)
Vla
Vc (snd)
Vc

match Horn, Tp
match Brass
consonant with Fl 1, Ob
consonant w Fl 2, Ob
coordinate with Ob
match Sax
match Ens Vl dissonant w Fl
coordinate with Fl 1, Gamba
match, coordinate with N Tp
match Horn
mezza voce (m.v.)
match Brass coordinate with Hn, Tp
match Tuba, Tb
tune 5/3 below Natural Trumpet
match N Tp, coordinate with Cl
coordinate with N Tp, Ob
match Hn
coordinate with Cl
tune 5/3 above Horn
coordinate with Hn, Ob
coordinate with Tuba
coordinate with Tb
match Ens Vc
match SQ Vl2
match SQ Vl1
bow changes ad lib.
transition gradually
coordinate with Ob

18

Fl (1)
Fl (2)
Ob
B♭ Cl (1)
B♭ Cl (2)
Alto Sax
Hn
Picc Tp (1)
N Tp (2)
Tb
Tba
Cues
SQ Vl1
SQ Vl2
SQ Vla
SQ Vc
Vln (snd)
Vln
Vla (snd)
Vla
Vc (snd)
Vc

poco f
p
f
match N Tp
support Brass harmonies
p sostenuto
consonant with N Tp, Horn, Cl 2
match Tb, Picc Tp
support Brass harmonies, match Tuba
tune with Tuba
tune to Horn
tune with Tuba, Horn
match Tuba
tune with Horn
ord.
pp sotto voce
sostenuto
tune consonant with SQ Vl2
tune consonant with SQ Vl1
fp
(pp)

28

Fl (1)
Fl (2)
Ob
take Bass Oboe
match Hn
B♭ Cl (1)
B♭ Cl (2)
tune to Picc Tp, Tb
Alto Sax
tune with Horn, Picc Tp
Hn
tune with Sax, Picc Tp
tune to Picc Tp
match Ob
Picc Tp (1)
match SQ Vl1
tune to Tb
N Tp (2)
ord.
(Tb plays A-39)
Tb
tune to Picc Tp, Sax
Tba

Cues

SQ Vl1
tune consonant with SQ Vla, Vl2, Picc Tp
match SQ Vl2
SQ Vl2
SQ Vla
tune consonant with SQ Vl1, Vl2
SQ Vc
coordinate, match Ens Vl

Vln (snd)
Vln
Vla (snd)
Vla
Vc (snd)
Vc
(keep pitch)

38

3 2 2

Fl (1)
tune with Fl 2
+47 +12
poco f *p*

Fl (2)
tune with Fl 1
+47 +12
poco f *p*

Bb Cl (1)
tune with Cl 2
take Bass Cl
E-37
poco f

Bb Cl (2)
match Cl 1
take Bass Cl
E-37
p

Hn
12 : 11 = -151c
F 1
B 0
+12 A -39 E -37 -2

Picc Tp (1)
take Bb Trumpet
5 : 6 = +316c
3 0
-4 +12
p

N Tp (2)
take Bb Trumpet
+47 ord.
fp
(T) 2
A-39
fp

Tb
F III
+12
12 : 11 = -151c
A-39
mezza voce

Hp (snd)

Hp
libero e sonore

Hpsd (snd)
(E♮) F♭ G♭ A♭
(D♭ C♭ B♭)

Hpsd
overlap tones ad lib., tempo rubato a piacere !
libero e sonore

3 2 2

Cues

SQ Vl1
E-37

SQ Vl2
5/4
+12
pp sotto voce

SQ Vla

SQ Vc

Vln (snd)
E-37

Vln
tune with Ens Vla
12 : 11 = -151c
mezza voce
poco f
transition to stopped
5/4
II
4°/III
rinf.

Vla (snd)

Vla
2°/III
p
2°/III II I II 2°/III
rinf.

Vc (snd)
tune with Ens Vla

Vc
2°/I
2°/II 2°/I
mezza voce *p* *rinf.* *pp*

45

4 2

Alto Fl (1)
take Alto Fl
+12
sempre m.v., dolce

Alto Fl (2)
take Alto Fl
-2 -4
sempre mezza voce, dolce
0

Hp (snd)

Hp
F♯ A♯

Hpsd (snd)

Hpsd

4 2

Cues

SQ Vl1
2°/III 4°/III 2°/III
pp sotto voce

SQ Vl2
2°/II
pp sotto voce

SQ Vla
+14
pp sotto voce

SQ Vc
+12
pp sotto voce
8/5 -2
5/4

Vln (snd)
-31 -47 -4 +18 +49 port.
A-39
+12 +14

Vln
5/3 63 : 64 = +27c 4/3 6/5
pp più f
80 : 81 = +22c port. 54 : 55 = +32c 11 : 12 = +151c
II 4°/III 45 : 44 = -39c 15 : 16 = +112c 4°/III 3/2 5/4 3/2 11/8
mezza voce

Vla (snd)

Vla
2°/III II 2°/III 4°/IV 3°/III 2°/II 2°/III 5°/IV 2°/II 5°/IV
pp più f

Vc (snd)
transition to stopped

Vc
5/1 3°/III 2°/I 3°/III I 3°/II 2°/III 3°/III 3°/II 4°/III 3°/I 3°/IV III 3°/I II 3°/I
pp più f pp

51

3 2

Alto Fl (1)

Alto Fl (2)

8 : 9 = +204c

come prima

+16

+12

come prima

15 : 16 = +112c

8 : 11 = +551c

D#-49

11°

Hp (snd)

Hp

gl.

G♯ D♯

E♯ B♯

Hpsd (snd)

Hpsd

3 2

Cues

SQ Vl1

3°/IV

2°/IV

2°/II

11/4

+49

poco f

SQ Vl2

3°/III 2°/II 3°/III

più f

gradually to stopped

SQ Vla

E-37

11 : 12 = +151c

+14

mezza voce

pizz.

f

SQ Vc

pp sotto voce

pizz.

2°/II

f

Vln (snd)

Vln

4°/II I

pp

11/8

pizz., sempre l.v.

f

I

2°/IV

arco

2°/I

Vla (snd)

Vla

5/2

4°/IV

pp

pizz., l.v.

2°/I

f

Vc (snd)

Vc

12/5

4°/III 7°/III 11°/III

(poco pont.)

ord.

4°/II

pizz.

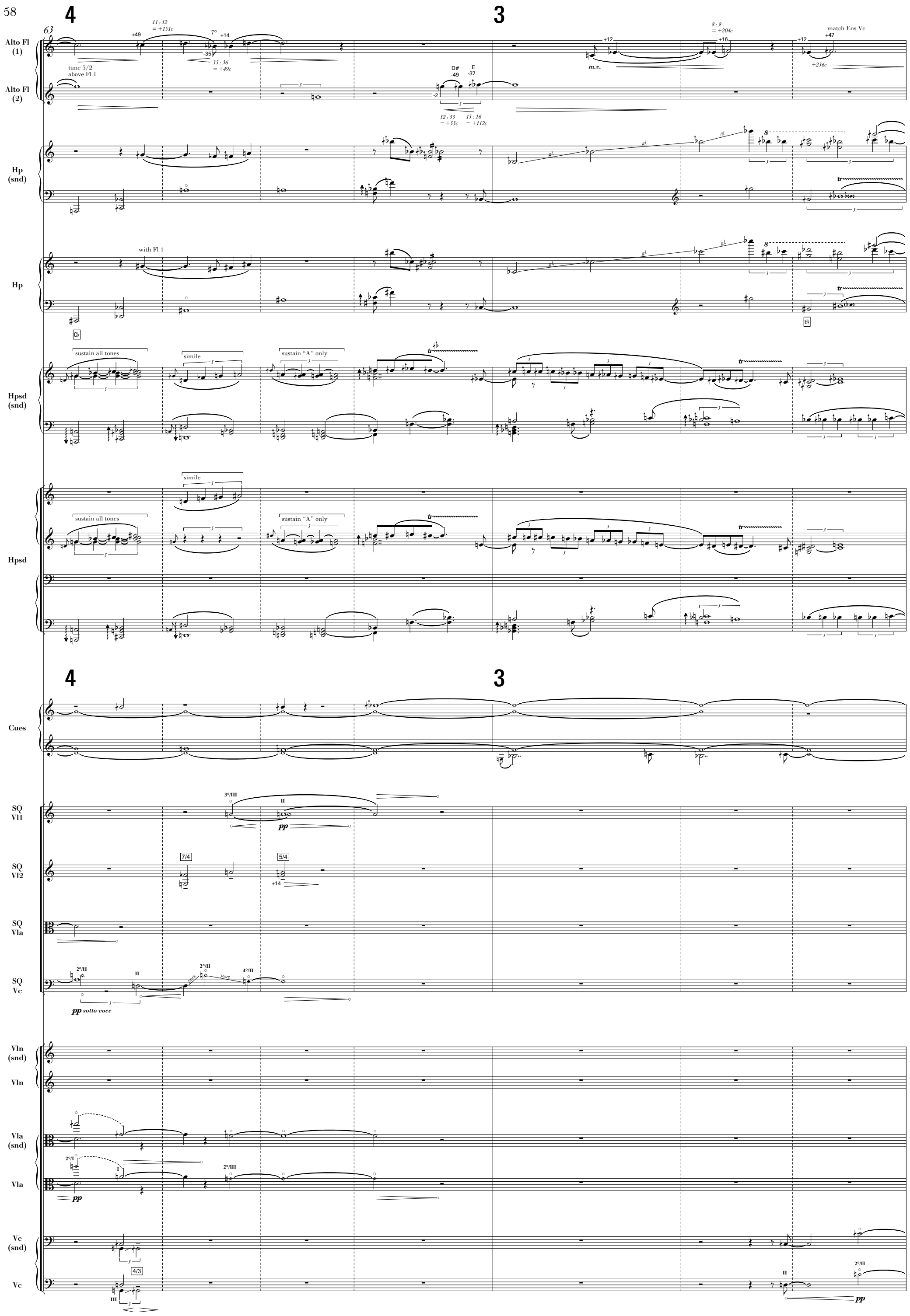
I

f

56

Alto Fl (1)
Alto Fl (2)
Hp (snd)
Hp
Hpsd (snd)
Hpsd
Cues
SQ Vl1
SQ Vl2
SQ Vla
SQ Vc
Vln (snd)
Vln
Vla (snd)
Vla
Vc (snd)
Vc

come prima
tune 2/3 below Fl 2
tune consonant with SQ Vla
tune consonant with SQ Vl1
pp sotto voce
mezza voce
più f
f
p
pizz.
arco


4
3
63
Alto Fl (1)
Alto Fl (2)
tune 3/2 above Fl 1
match Ens Vc
Hp (snd)
Hp
with Fl 1
Hpsd (snd)
sustain all tones
simile
sustain "A" only
Hpsd
Cues
SQ Vl1
SQ Vl2
SQ Vla
SQ Vc
pp sotto voce
Vln (snd)
Vln
Vla (snd)
Vla
Vc (snd)
Vc

70

Alto Fl (1)
Alto Fl (2)
Hp (snd)
Hp
Hpsd (snd)
Hpsd
Cues
SQ Vl1
SQ Vl2
SQ Vla
SQ Vc
Vln (snd)
Vln
Vla (snd)
Vla
Vc (snd)
Vc

consonant with Fl 2
tune consonant with Fl 1
sustain all
hocket with Ens Vc
hocket with Ens Vl

78

Alto Fl (1)
Alto Fl (2)
Hp (snd)
Hp
Hpsd (snd)
Hpsd
Cues
Vln (snd)
Vln
Vla (snd)
Vla
Vc (snd)
Vc

tune 2/3 below A Fl
tune 3/2 above Fl 1
take Bass Fl
(lute stop)
pp
pocof
più f
mezza voce

87

Hn
Tb
tune to Ens Str
tune with Tb
tune with Horn
match Vlc
match Ens Vlc
tune to Ens Vla
tune to Ens Vc
tune to Vla
match Brass
sostenuto
poco f
f
p

97

Bass Ob
Alto Sax
Hn
Bb Tp (1)
Bb Tp (2)
Tb
Tba
Cues
SQ Vla
Vln (snd)
Vln
Vla (snd)
Vla
Vc (snd)
Vc

match Hn
mezza voce
match Tb
11° (of Tp+Hn harmony)
coordinate with Tp 2
tune with Tp 1
tune to Tp 2 (7/6 then 6/5)
tune with Hn
match Hn, B Ob
match Sax
coordinate with Hn
match Tb
tune with Hn
match Horn
line before a pitch indicates the direction in which a previous fingering may need slight correction (poco port. ad lib.)
ord. (slides)
support Sax
11. partial of slightly low F I position = 8. partial of Bb I
tune to Hn
tune with Tuba
cues in this section are a reduction to the main harmony tones
sul IV
tune to Ens Vc
tune with Hn
pp sotto voce

107

Bass Ob
Alto Sax
Hn
Bb Tp (1)
Bb Tp (2)
Tb
Tba
Cues
SQ Vl1
SQ Vl2
SQ Vla
SQ Vc

tune with Tp, Tb
tune with Hn, Tuba
tune with Tp, Sax
tune 2/3 below Tp, match Hn
tune 3/2 above Bass Ob
tune with Tp, Hn
support Tp
match Tp
mezza voce
m.v.
tune with Tp 2, Sax
tune with Tuba, Bass Ob
support Sax
match Tuba
cut off with Sax
match, continue Tp
tune to Tuba
tune with Hn, Bass Ob
tune with SQ Vc
match Tb
match Sax
tune 7/4 below SQ Vla
pp sotto voce

115

Bass Ob
Alto Sax
Hn
B♭ Tp (1)
B♭ Tp (2)
Tb
Tba
Cues
SQ Vl2
SQ Vla
SQ Vc
Vln (snd)
Vln
Vc (snd)
Vc

tune to Sax
support Tp
mezza voce
match Tb
tune to Tuba
tune to Tuba, Str
coordinate with Tp 2
tune with Tp, Tb
tune with Hn, Tb
tune with Hn, Tp, Tb
coordinate with Hn
match Hn
tune with Hn, Tp
tune with Bass Ob, Hn
tune with SQ Vc
pp sotto voce
match Ens Vc

124

Bass Ob
Alto Sax
Hn
B♭ Tp (1)
B♭ Tp (2)
Tb
Tba
Cues
SQ Vl1
SQ Vl2
SQ Vla
SQ Vc
Vln (snd)
Vln
Vla (snd)
Vla

tune with Tb, Tuba
match Hn
match Tuba
match Bass Ob
continue Tp 1
tune to B Ob, Str
tune with Tuba
tune with Tb
match Sax
pp sotto voce

131

Bass Ob
Bass Cl (1)
Bass Cl (2)
Alto Sax
Hn
B♭ Tp (1)
B♭ Tp (2)
Tb
Tba
Cues
SQ Vl1
SQ Vl2
SQ Vla
SQ Vc
Vln (snd)
Vln
Vla (snd)
Vla
Vc (snd)
Vc

take Ob
mezza voce
tune to Tb
match Tuba
pp sotto voce
match Str, Tuba
consonant
tune to Sax, Tp 2
tune to Sax, Tp 1
tune to Tuba
tune to B Ob
play 7. partial in the same position
match Str, Sax
tune with Tb
match Ens Vla, consonant
with Ens Vc
match Ens Vc
with SQ Vl2
sul II
sul I

141

Bass Cl (1)

Bass Cl (2)

Alto Sax

Tb

Tba

Tuned Objects

sempre l.v. unless indicated

p, delicate

Hp (snd)

Hp

libero, a piacere

Hpsd (snd)

Hpsd

lute stop

lute stop

libero

Cues

SQ Vl1

SQ Vl2

SQ Vla

SQ Vc

pp sotto voce

pp sotto voce

5

151

Bass Fl (1)

Bass Fl (2)

Bass Cl (1)

Bass Cl (2)

coordinate with Perc.

pp sotto voce

coordinate with Perc.

pp sotto voce

36 : 35
= -49c

coordinate with Perc.

pp sotto voce

coordinate with Perc

pp s.v.

pp s.v.

coordinate
with Perc.

pp sotto voce

Tuned Objects

sempre l.v. unless indicated

p, delicate

Hp (snd)

Hp

Hpsd (snd)

Hpsd

5

SQ Vl1

SQ Vl2

SQ Vla

SQ Vc

pp sotto voce

Vla (snd)

Vla

pp sotto voce

Vc (snd)

Vc

pp sotto voce

156

3

4

Bass Fl (1)

Bass Fl (2)

Bass Cl (1)

Bass Cl (2)

Tuned Objects

Hp (snd)

Hp

Hpsd (snd)

Hpsd

pp s.v.

pp sotto voce

15 : 16 = +112c

12 : 11 = -151c

11 : 10 = -165c

E-37

u11

l.h.

163

3

2

Bass Cl (2)

Tuned Objects

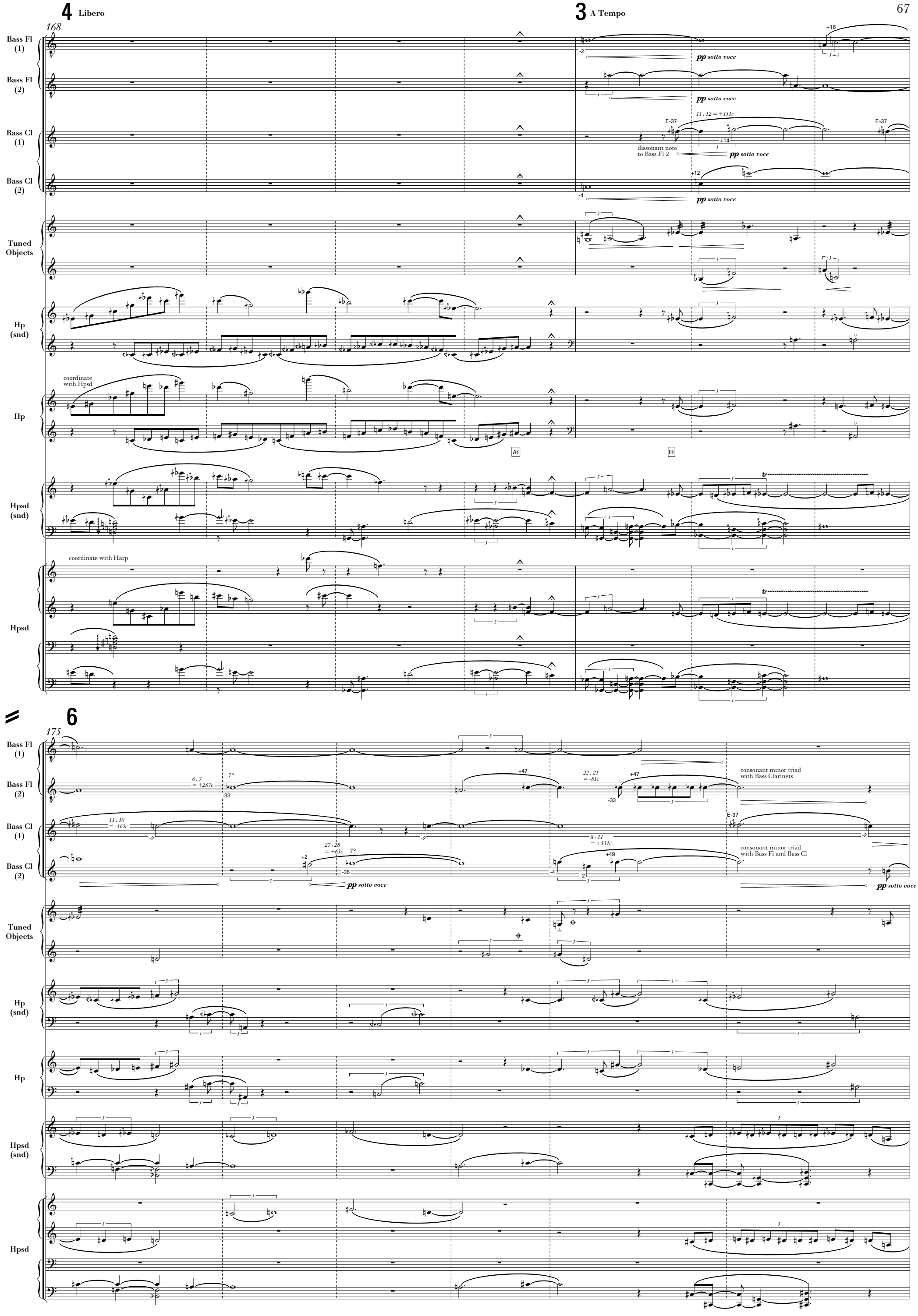
Hp (snd)

Hp

Hpsd (snd)

Hpsd

r.h.


4 Libero
3 A Tempo
168
Bass Fl (1)
Bass Fl (2)
Bass Cl (1)
Bass Cl (2)
Tuned Objects
Hp (snd)
Hp
Hpsd (snd)
Hpsd
pp sotto voce
11 : 12 = +151c
E-37
dissonant note to Bass Fl 2
coordinate with Hpsd
coordinate with Harp
6
175
6 : 7 = +267c
7°
11 : 10 = -165c
27 : 28 = +63c
22 : 21 = -81c
8 : 11 = +551c
consonant minor triad with Bass Clarinets
consonant minor triad with Bass Fl and Bass Cl

181

Bass Fl (1)

Bass Fl (2)

Bass Cl (1)

Bass Cl (2)

Tuned Objects

Hp (snd)

Hp

Hpsd (snd)

Hpsd

tune with Bass Clar

tune with Bass Cl

189

Bass Fl (1)

Bass Fl (2)

Bass Cl (2)

Tuned Objects

Hp (snd)

Hp

Hpsd (snd)

Hpsd

3 4

195

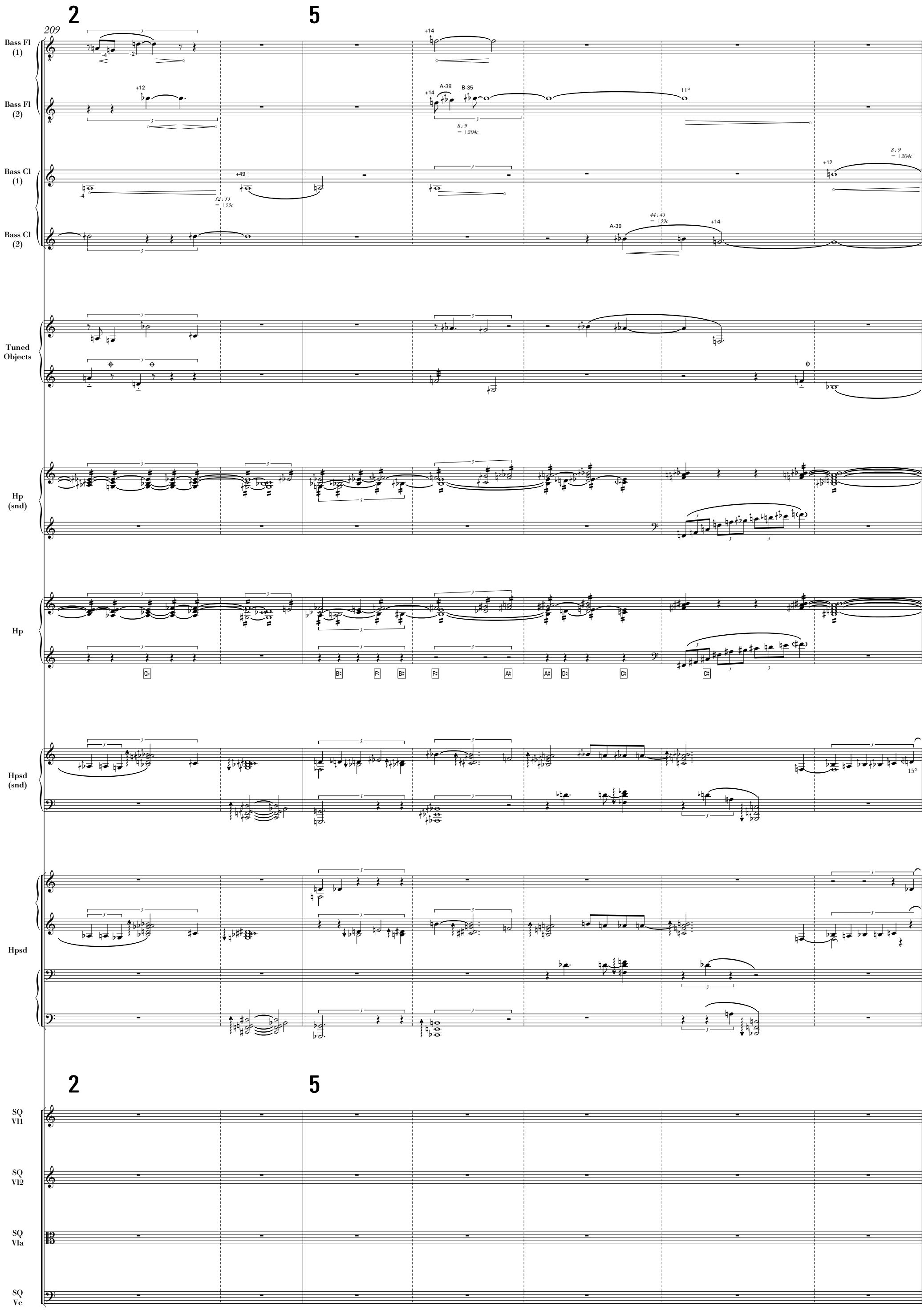
Bass Fl (1)
Bass Fl (2)
Bass Cl (1)
Bass Cl (2)
Tuned Objects
Hp (snd)
Hp
Hpsd (snd)
Hpsd

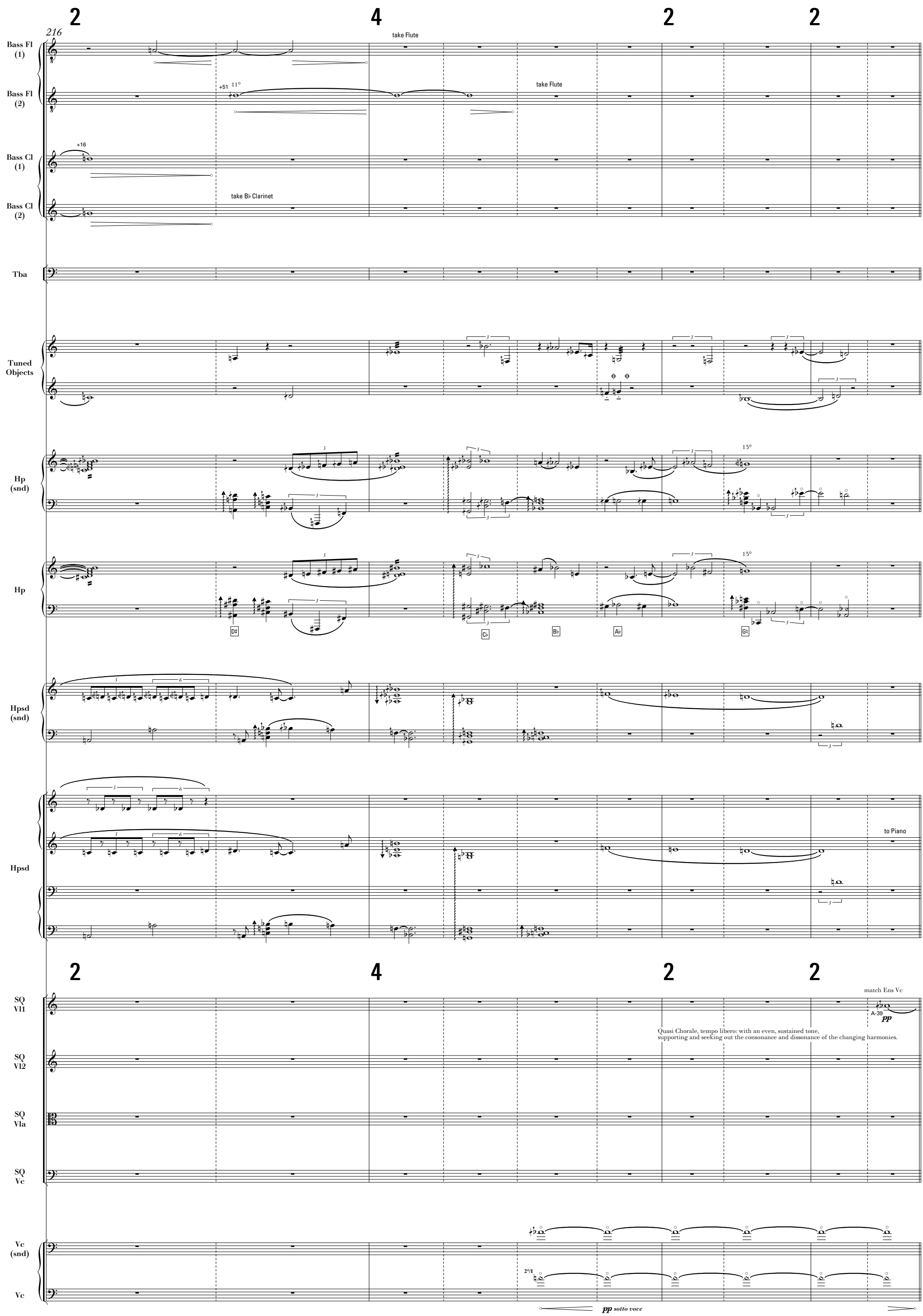
coordinate with Bass Cl 2
coordinate with Bass Cl 1

2 5

202

tune consonant with Bass Clar, Bass Fl
tune consonant with Bass Cl, Bass Fl 1
tune 2/5 below Bass Cl 2
tune with Bass Cl 1


2
5
209
Bass Fl (1)
Bass Fl (2)
Bass Cl (1)
Bass Cl (2)
Tuned Objects
Hp (snd)
Hp
Hpsd (snd)
Hpsd
SQ Vl1
SQ Vl2
SQ Vla
SQ Vc
+14
+12
A-39
B-35
11°
8 : 9 = +204c
+49
32 : 33 = +53c
44 : 45 = +39c
15°
C♭
B♯
F♮
B♯
F♯
A♮
A♯
D♮
C♮
C♯


216
Bass Fl (1)
Bass Fl (2)
take Flute
take Flute
Bass Cl (1)
Bass Cl (2)
take B♭ Clarinet
Tba
Tuned Objects
Hp (snd)
Hp
Hpsd (snd)
Hpsd
to Piano
SQ Vl1
SQ Vl2
SQ Vla
SQ Vc
match Ens Vc
A-39
pp
Quasi Chorale, tempo libero: with an even, sustained tone,
supporting and seeking out the consonance and dissonance of the changing harmonies.
Vc (snd)
Vc
pp sotto voce

226

Bass Cl (1)

tune with SQ Vla

pp sotto voce

Tba

tune with B Cl, SQ Vla

pp sotto voce

SQ Vl1

match Ens Vla

come prima

SQ Vl2

Quasi Chorale, tempo libero: with an even, sustained tone, supporting and seeking out the consonance and dissonance of the changing harmonies.

pp

SQ Vla

Quasi Chorale, tempo libero: with an even, sustained tone, supporting and seeking out the consonance and dissonance of the changing harmonies.

pp

SQ Vc

Quasi Chorale, tempo libero: with an even, sustained tone, supporting and seeking out the consonance and dissonance of the changing harmonies.

pp

match SQ Vla

come prima

Vla (snd)

Vla

pp sotto voce

Vc (snd)

Vc

pp sotto voce

simile

235

Bass Cl (1)

tune with SQ Vla, Cl

Bb Cl (2)

tune with SQ Vla

pp sotto voce

Tba

tune with SQ Vc

SQ Vl1

sotto voce

consonant with SQ Vl2

SQ Vl2

tune 2/3 below SQ Vla

tune 5/6 below SQ Vl1

come prima

SQ Vla

come prima

SQ Vc

Vla (snd)

Vla

simile

Vc (snd)

Vc

match SQ Vl2

244

Bass Cl (1)
simile
tune with B Cl

B♭ Cl (2)
simile

SQ Vl1
sotto voce
+12 8 : 9 = +204c 54 : 55 = +32c +47
tune with SQ Vc
tune 5/6 below Vl2
slightly higher than Vc
tune to SQ Vl2, Vla

SQ Vl2
tune 3/2 above SQ Vc +51
55 : 56 = +31c 7° 21 : 22 = +81c 11°
-17 E-37 dissonant to SQ Vla
consonant with SQ Vl1
sotto voce

SQ Vla
sotto voce
consonant with SQ Vl1&2 +51 +49
s.v.

SQ Vc
+14
consonant with SQ +12
consonant with SQ +14
A-39
33 : 32 = -53c 10 : 9 = -182c 10 : 11 = +165c 11 : 12 = +151c 8 : 9 = +204c

Vln (snd)

Vln
II
pp sotto voce
I

Vc (snd)
3°/I 4°/II 6/5 5/3

Vc

256

Tb

Tba

Cues

SQ Vl1
sotto voce
55 : 54 = -32c 8 : 11 = +551c 15 : 16 = +112c 11°
+51 E-37
8 : 11 = +551c +12

SQ Vl2
tune with SQ Vla
+12 +16
11 : 8 = -551c 8 : 9 = +204c
54 : 55 = +32c +47
tune with SQ Vla +12

SQ Vla
15 : 16 = +112c +14
A-39
12 : 11 = -151c tune with SQ Vl1 E-37
+14

SQ Vc
B-35
tune with SQ Vl1
33 : 32 = -53c +12
tune with SQ Vla
tune with SQ Vl1
A-39
12 : 11 = -151c
sotto voce
sotto voce
tune 2/3 P5 below SQ Vl1
E
I
senza sord.
beating with Ens Vc

Vln (snd)
5/4

Vln
5/4
simile

Vla (snd)

Vla
III

Vc (snd)

Vc
sul IV
I
beating with SQ Vc

attacca

Pythagoras Drawing 2

Tempo ad libitum, vary from bar to bar as desired, swinging

ca. 66-99

Flute (1)
Flute (2)
Oboe
Bass Clarinet in B♭ (1)
Clarinet in B♭ (2)
Alto Saxophone
Horn in F
Trumpet in B♭ (1)
Trumpet in B♭ (2)
Tenorbass Trombone
5-valve F Tuba
Glockenspiel
Vibraphone
Crotales
Harp (sound)
Harp (scordatura)
Piano

Tempo ad libitum, vary from bar to bar as desired, swinging

ca. 66-99

Cues
SQ Violin 1
SQ Violin 2
SQ Viola
SQ Violoncello
Violin (sound)
Violin (scordatura)
Viola (sound)
Viola (scordatura)
Violoncello (sound)
Violoncello (scordatura)

9

Fl (1)

Fl (2)

Ob

Bass Cl (1)

B♭ Cl (2)

Alto Sax

Hn

B♭ Tp (2)

Tb

Glock

Vib

Crot

Hp (snd)

Hp

Pf

Cues

SQ Vl1

SQ Vl2

SQ Vla

SQ Vc

Vln (snd)

Vln

Vla (snd)

Vla

Vc (snd)

Vc

(2. time fine)

1. time only from this point on

tune to Hn

tune to SQ Vla C

tune to Cl

senza dim.

match Fl

(A-string only)

String Quartet: Villa Massimo, Roma 5.7.2011 / 29.11.2011 Ensemble: Berlin, 30.10.2016