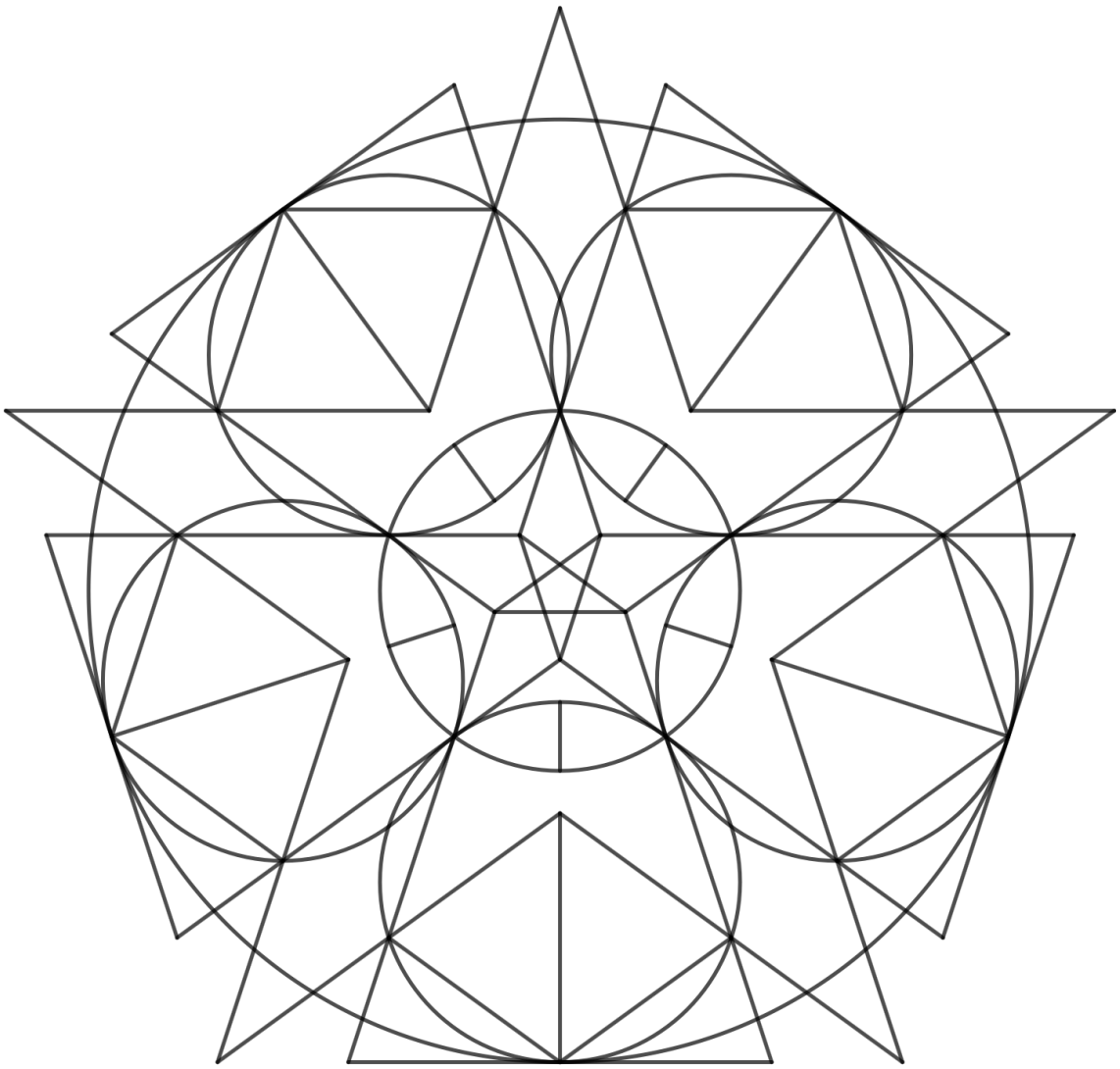
Seeking Gnosis

for Mixed Ensemble



Full Score

Pedro Laranjeira Finisterra

November 2022 / Revised: August 2023
Re-edited: July 2024

Seeking Gnosis (2022/2023)
for Mixed Ensemble

Full Score in C

Composition and Cover Illustration: Pedro Laranjeira Finisterra

Duration: ca. 13'

List of Instruments:

-Flute (doubling Piccolo and Alto Flute)
-Clarinet in Bb & Bass Clarinet in Bb
-Alto Saxophone
-Bassoon

-Electric Guitar

-Percussion:
Crotales
Shaker
(5) Woodblocks
2 Bongos
2 Congas
Kick Drum
Bass Drum
Large/Low Gong

-Viola
-Violoncello

Performance Notes

As a starting point, this piece freely explores the concept of musically adapting a variety of numeric possibilities derived from the proportion 11/7 into pitch and rhythm, such as:

- thinking of it as a Just Intonation frequency ratio
- thinking of it as a polyrhythm of 11 pulses against 7
- having 7 and 11 as two integers within the Luca Series (1, 3, 4, 7, 11, 18, etc.) and translating these integers as musical durations of 1, 3, 4, 7, 11 and 18 quavers/8^{th} notes

Alongside these ideas, other unrelated pitch and rhythmic materials are explored alongside them.

Scales, Microtonality and Intonation in different instruments

This piece musically explores the following microtonal scales:

- 4 Equal Divisions of the 11/7 ratio (4ED11/7) – a 'compressed whole tone scale' that does not repeat at the octave
- 5 Equal Divisions of the Octave (5EDO) – a 'pentatonic resembling scale' that repeats at the octave
- 1 Equal Division of 5/4 (1ED5/4) - a scale with equal steps of the size of the 5/4 Natural Major third (or a 'compressed augmented chord' that does not repeat at the octave)
- 11 Equal Divisions of the Octave (11EDO) – a 'microtonally chromatic scale' with 1 step missing, but still repeats at the octave

Given the instrumentation of this piece (i.e. the absence of electroacoustics and special microtonal instruments), these scales are actually never used in this piece. Instead, a variety of microtonal and non-microtonal approximations of these scales is explored on the different instruments (whose intonational practices are in themselves varied), sometimes systematically, other times more freely. The desired overall result would then be a richness in performative intonation and microtonal variety.

In practical terms, these scales are then approximated into 12, 24, 48 and 72 notes per octave and are notated through the usage of microtonal accidentals in the following ways:

- Crotales: The Crotales are the only instruments fixed in 12 Equal Divisions of the Octave and therefore have no microtones. 12EDO is the only system in this instrument used to approximate material from the microtonal scales mentioned above.

- Woodwinds: All the microtonal scales are approximated into either 12 notes per octave (semitones), 24 (semitones and quarter tones) and/or 48 (semitones, quarter and eighth tones). The performers should treat the microtonal intervals in the same way they treat semitones (a semitone means roughly 100 cents, a quarter tone means 50 cents, and an eighth tone means 25 cents, but their intonation naturally varies in performance). The Bassoon does not have microtones, with the exception of two quarter tones in its duo with the electric guitar at the end of the piece.

- Electric Guitar: The electric guitar makes use of a scordatura which allows it to play semitones, quarter and eighth tones (although not evenly distributed throughout the entirety of the pitch range), allowing the employment of 12, 24 and 48 Equal Divisions of the Octave. The above microtonal scales are then approximated into these systems but less systematically than in the woodwinds. In the full score, the electric guitar part is notated using two staff systems. The top system notates musical notes in 'concert pitch' (using microtonal notation) and the bottom system indicates where each pitch should be played as if there was no scordatura (functionally serving as a 'tablature'). The individual part only includes this second system. It is important for the performer to play all the pitches exactly in the string/fret positions that are indicated, as most microtonal pitches can only be achieved in only one fret in a specific string (due to the scordatura).

- Strings: Some intervals of the microtonal scales listed above are very close to Just Intonation ratios that are present in the harmonic series and that can be tuned by ear (some more easily than others). These Just Intonation ratios are thus represented and notated into 72 notes per octave (semitones, quarter, sixth and twelfth tones) and with boxed text notes identifying them, giving a qualitative description and indicating which reference

notes should be used to tune them by ear (e.g. "5/4 Natural Major Third above Vlc. C"). Just Intonation is used in either slow passages or in long notes (while other instruments are playing faster material). However, in faster passages, the above microtonal scales are approximated into 12 notes per octave (semitones) and 24 (semitones and quarter tones). For these faster passages which employ 12 and 24 notes per octave (and which are always identified in the score in boxed text notes to distinguish them from the materials based in Just Intonation), the performers should treat the microtonal intervals the same way they treat semitones (a semitone means roughly 100 cents and a quarter tone 50 cents, but their intonation naturally varies in performance).

The Electric Guitar Scordatura

The electric guitar strings should be retuned with the following scordatura:

E – 200 cents (1 whole tone to D)
B – 50 cents (1 quarter tone below B)
G + 25 cents (1 eighth tone above G)
D (no retuning)
A – 50 cents (1 quarter tone below A)
E – 25 cents (1 eighth tone below E)

This scordatura can be achieved by using a guitar tuner (using the cent deviation references) or by ear using the following methodology:

1. Retuning the high E string a whole tone until it is tuned a perfect octave with the D string.
2. Lowering the A string down until, when pressing it on the 5th and 6th frets and playing both pitches simultaneously with the open D string, produces one quarter tone down (5th fret) and one quarter tone up (6th fret). To tune both pitches symmetrically at the same distance from D, adjust the tuning of the A string until the speed of the beatings produced when playing them simultaneously with the open D string is the same.
3. Lowering the low E string until, when pressing it on the 10th fret and playing it simultaneously with the open D string and the A string on the 5th fret, produces one eighth tone down the open D string and one eighth tone up the quarter tone flat D (5th fret on the A string). Similarly adjust the tuning of the low E string until the beatings of both intervals are at the same speed.
4. Lowering the B string down until, when pressing it on the 3rd and 4th frets and playing both pitches simultaneously with the high E string (now tuned to D), produces one quarter tone down (3rd fret) and one quarter tone up (4th fret). To tune both pitches symmetrically at the same distance from D, adjust the tuning of the B string until the speed of the beatings produced when playing them simultaneously with the open high E string (tuned on D) is the same.
5. Rising the G string until, when pressing it on the 7th fret and playing it simultaneously with the open high E string (retuned to D) and the B string on the 4th fret, produces one eighth tone up the open high E string (retuned to D) and one eighth tone down the quarter tone sharp D (4th fret on the B string). Similarly adjust the tuning of the G string until the beatings of both intervals are at the same speed.

Accidentals

This piece makes use of traditional looking semitone and quarter tone accidentals and, for other microtones (eighth, sixth and twelfth tones), arrows attached to those same accidentals are used to indicate the 'microtonal deviation' from those semitones and quartertones.

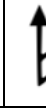
In the crotales, only semitones are used (allowing for 12 notes per octave):

Semitones			

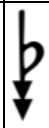
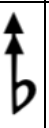
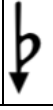
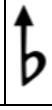
In the bassoon, semitone and quartertone accidentals are used (allowing for 12 and 24 notes per octave):

Semitones					
Quarter tones					

In the woodwinds (except the bassoon) and in the top electric guitar system, semitone, quartertone and single-arrowed accidentals are used (allowing for 12, 24 and 48 notes per octave):

Semitones											
Quarter tones											
Eighth tones											

In the strings, semitone, quartertone, single-arrowed and double-arrowed accidentals are used (allowing for 12, 24 and 72 notes per octave):

Semitones																
Quarter tones																
Sixth tones																	
Twelfth tones																	

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Score in C

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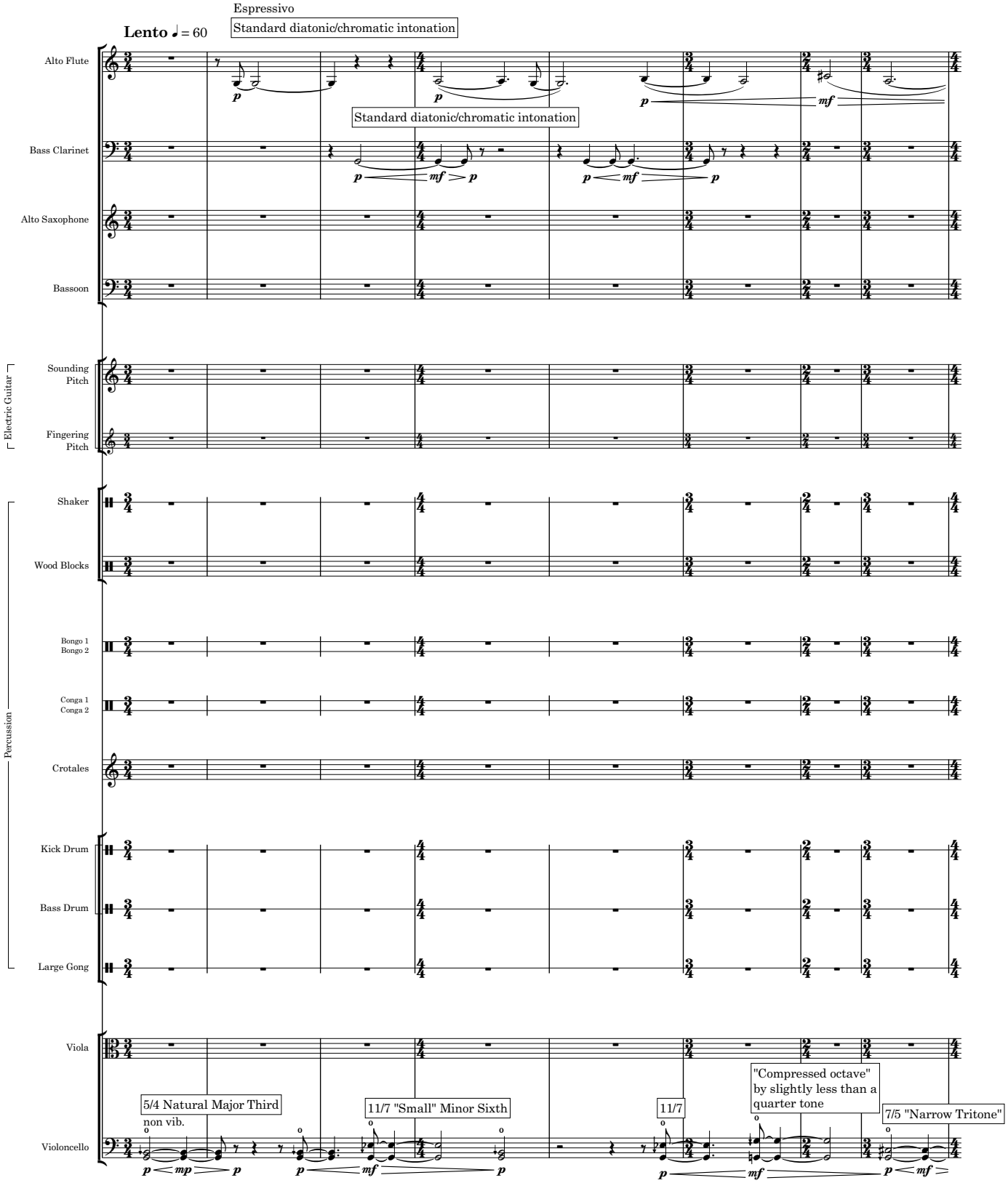



A
9
To Flute
A. Fl.
B. Cl.
A. Sax.
Standard diatonic/chromatic intonation
Bsn
Electric Guitar
S.
F.
Perc.
Crot.
Vla
4/5 Natural Major Third
below B. Cl. & Bsn.
8/9 Natural Major Second
below B. Cl. & Bsn.
5/7 "Narrow Tritone"
bellow B. Cl. & Bsn.
Vc.
B
17
Fl.
Crotales
11/7
7/4 "Narrow" Minor Seventh
Compressed octave
"Neutral Tenth"


C
D
Flute
Espressivo
To Clarinet in B♭
Clarinet in B♭
Standard semitone, quarter-tone and eighth-tone intonation
Standard semitone, quarter-tone and eighth-tone intonation
Crotales
Large Gong
7/4 "Narrow" Minor Seventh above G
(ignore other instruments' intonation)
non vib.
7/4 "Narrow" Minor Seventh above C
Espressivo
Standard semitone, quarter-tone and eighth-tone intonation
Espressivo
Espressivo
Fl.
Cl. in B♭
A. Sax.
Bsn
S.
F.
Electric Guitar
Crot.
L. G.
Percussion
Vla
Vc.
E. Gtr.


E Più mosso (♩ = 66)
43
Fl.
Cl. in B♭
A. Sax.
Bsn
E. Gtr.
S.
F.
Percussion
W. Bl.
Wood Blocks
(hard sticks)
K. Dr.
Kick Drum
Standard semitone and quarter-tone intonation
Vla
Standard semitone and quarter-tone intonation
Vc.
53
Electric Guitar
3:2


F
Allegro ♩= 140
61
Fl.
Cl. in B♭
A. Sax.
Bsn
Electric Guitar
S.
F.
Percussion
W. Bl.
K. Dr.
Vla
Vc.
f
sempre
mf
3:2


G
68
Fl.
Cl. in B♭
A. Sax.
Bsn
l.v.
E. Gtr.
S.
F.
Percussion
W. Bl.
K. Dr.
Vla
Vc.
(f)
p
f
(mf)
3:2


75
Fl.
Cl. in B♭
A. Sax.
Bsn
l.v.
S.
F.
[Electric Guitar]
l.v.
W. Bl.
K. Dr.
[Percussion]
Vla
Vc.
3:2


80
H
Fl.
Cl. in B♭
A. Sax.
Bsn
8va
S.
F.
[Electric Guitar]
Congas
(±4 against 5)
(±5 against 4)
(±4 against 5)
(±4 in the place of 5)
(±4 against 5)
Con. 1
Con. 2
Vla
5/4 Natural
Major Third
non vib.
11/7 "Small" Minor Sixth
7/5 "Small Tritone"
Vc.
3:2


I
86
Fl.
Cl. in B♭
A. Sax.
Bsn
Electric Guitar
S.
F.
Percussion
W. Bl.
Wood Blocks
K. Dr.
Kick Drum
Vla
Standard semitone and quarter-tone intonation
Vc.
90
E. Gtr.


J
95
Fl.
Cl. in B♭
A. Sax.
Bsn
Percussion
W. Bl.
K. Dr.
Vla
Vc.
100
3:2


K Allegro ♩ = 140
107
Fl.
Cl. in B♭
A. Sax.
Bsn
W. Bl.
Crotales
Crot.
K. Dr.
Percussion
Vla
Vc.
113


L
Energetic (♩ = 140)
120
Fl.
Cl. in B♭
A. Sax.
Bsn
Kick Drum
K. Dr.
Vla
Vc.
p
mf
p sempre
125
130


135
M
Fl.
Cl. in B♭
A. Sax.
Bsn
K. Dr.
Vla
Vc.
140
Crotales
Crot.
(Kick Drum)
5/4 Natural Major Third above Vc.
Standard semitone and quarter-tone intonation
Percussion


N
Espressivo (♩ = 140)
148
Fl.
Cl. in B♭
A. Sax.
Bsn
Percussion
Crot.
K. Dr.
Vla
Vc.
O
Contemplative ♩ = 60
155
Electric Guitar
S.
F.
Perc.
Bass Drum
B. Dr.
Low Gong
L. G.
5/4 "Natural" Major Third
5/4
simile
Vla
Vc.
162
E. Gtr.
7/5 "Narrow" Tritone

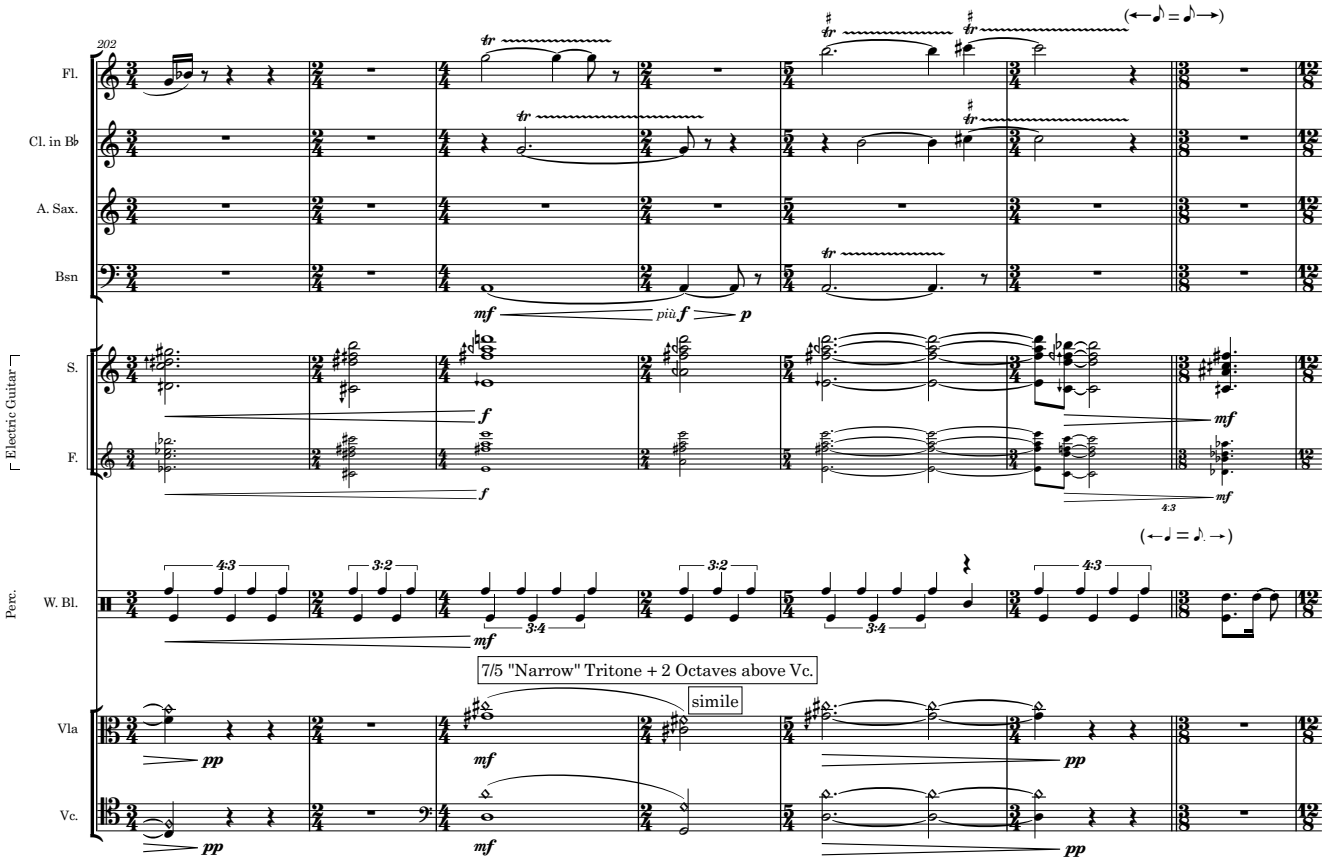

P Allegro ♩ = 140
168
Fl.
Cl. in B♭
A. Sax.
Bsn
E. Gtr.
S.
F.
Bongos
(±4 against 5)
(±5 against 4)
(±4 against 5)
(±4 in the place of 5)
(±4 against 5)
Bon. 1
Bon. 2
5/4 "Natural" Major Third above Vc.
Standard semitone & quarter-tone intonation
5/4 above Vc.
Vla
Vc.


5:4
♩ = ♩
(♩ = 175)
173
To Piccolo
(as much as possible
(optional: octave higher)
Electric Guitar
3:4
(±4 against 5)
(±4 against 5)
(±5 against 4)
5/4 above Vc.
5/4 above Vc.


Piccolo
(♩ = 140)
(♩ = 112)
(♩ = 140)
To Flute
(♩ = 112)(♩ = 140)
179
Picc.
Cl. in B♭
A. Sax.
Bsn
To Bass Clarinet
Bass Clarinet
Electric Guitar
S.
F.
(±5 against 4)
(±4 against 5)
(±4 against 5)
Bon. 1
Bon. 2
7/5 "Narrow" Tritone + Octave above Vc.
5/4 above Vc.
5/4 above Vc.
Vla
Vc.


Q
Poco meno mosso (♩ = 112)
accel. A tempo (♩ = 140)
186
Fl.
Flute
To Clarinet in B♭
Clarinet in B♭
Cl. in B♭
A. Sax.
Bsn
Electric Guitar
S.
F.
Woodblocks
(soft sticks)
Percussion
W. Bl.
Bon. 1
Bon. 2
7/5 "Narrow" Tritone + Octave above Vc.
Vla
Vc.


194
Fl.
Cl. in B♭
A. Sax.
Bsn
Electric Guitar
S.
F.
(same transposed chord shape alternation between ① & ② with ①②③ until bar 216)
Perc.
W. Bl.
Vla
Vc.


202
Fl.
Cl. in B♭
A. Sax.
Bsn
più f
Electric Guitar
S.
F.
Perc.
W. Bl.
7/5 "Narrow" Tritone + 2 Octaves above Vc.
simile
Vla
Vc.


(←♪ = ♪→)
trills with free adjacent notes
R
209
Fl.
Cl. in B♭
A. Sax.
Bsn
Electric Guitar
S.
F.
Percussion
W. Bl.
K. Dr.
Vla
Vc.
Follow the Guitar's intonation
Kick Drum
Standard semitone & quarter-tone intonation
(Follow the Guitar's intonation)
non vib.
Follow the intonation of the Guitar's lowest notes
S
Allegro (♩ = 140)
217
E. Gtr.
5/4
7/5 "Small" Tritone
3:4
3:2


3:2
(= 108)
rit.
To Alto Flute
225
Fl.
Cl. in B♭
A. Sax.
Bsn
S.
F.
W. Bl.
K. Dr.
Electric Guitar
Percussion
Standard semitone & quarter-tone intonation
arco
Vla
Vc.
Lento
molto accel.
molto rit.
234
Shaker
(as fast as possible)
Shak.
T Contemplative = 60
235
A. Fl.
Crot.
Bass Drum
B. Dr.
Low Gong
L. G.
Ignore the other instrument's intonation
and tune to yourself (except when otherwise indicated)
5/4 Natural Major Third
non vib.
5/4
Tune to the E. Guitar's F♯


U
245
A. Fl.
Cl. in B♭
A. Sax.
Bsn
Electric Guitar
S.
F.
Perc.
B. Dr.
L. G.
Vla
Vc.
simile
3:2
7/5 "Narrow" Tritone
5/4 above Vc.
7/5 above Vc.
Tune to the E. Guitar's F♯
5/4
4/5 Natural Major Third below Vla.
(or harm. w/ different timbre)
V
255
Alto Flute
Ignore E. Guitar's intonation of D♮
5/4
Tune D♯ to your F♯
arco


W
Allegro ♩ = 140
264
To Piccolo
Piccolo
Picc.
Cl. in B♭
A. Sax.
Bsn
E. Gtr.
S.
F.
Bongos
(hard sticks)
Bon. 1
Bon. 2
5/4
5/4
5/4
7/5 "Small" Tritone
Vla
Vc.
X
271
To Flute
simile
Electric Guitar
Woodblocks
(hard stickes)
Percussion
W. Bl.
Crotales
Crot.
Kick Drum
K. Dr.
7/4 "Narrow Minor Seventh" above G
(ignore other instruments' intonation)
7/4 "Narrow Minor Seventh" above C


Flute
277
Fl.
Cl. in B♭
A. Sax.
Bsn
Electric Guitar
S.
F.
Wood Blocks
Percussion
W. Bl.
Crotales
Crot.
Vla
Vc.
284
E. Gtr.
Standard semitone & quarter-tone intonation
Standard semitone & quarter-tone intonation


292
Y
Fl.
Cl. in B♭
A. Sax.
Bsn
Electric Guitar
S.
F.
Percussion
W. Bl.
Woodblocks
mf sempre
K. Dr.
Kick Drum
mf sempre
Vla
Vc.
3:2
5:4


299
Z
Fl.
Cl. in B♭
A. Sax.
Bsn
E. Gtr.
S.
F.
Percussion
W. Bl.
K. Dr.
Vla
Vc.
3:2


306
Fl.
Cl. in B♭
A. Sax.
Bsn
l.v.
S.
F.
Electric Guitar
W. Bl.
K. Dr.
Percussion
Vla
Vc.


AA
BB
312
Fl.
Cl. in B♭
A. Sax.
Bsn
S.
F.
E. Gtr.
W. Bl.
K. Dr.
Percussion
Vla
Vc.


321
Fl.
Cl. in B♭
A. Sax.
Bsn
S.
F.
Electric Guitar
W. Bl.
K. Dr.
Percussion
Vla
Vc.
3:2
5:4
f


CC
327
Fl.
Cl. in B♭
A. Sax.
Bsn
S.
F.
Electric Guitar
W. Bl.
K. Dr.
Percussion
Vla
Vc.
3:2
f
mp


DD
Lento (♩ = 60)
expressivo
334
Bsn
S.
F.
Electric Guitar
simile
EE
A tempo ♩ = 60
335
Alto Flute
To Flute
A. Fl.
Cl. in B♭
A. Sax.
Bsn
Bass Drum
B. Dr.
Vla
Vc.
pizz.
344
Flute
Fl.
Crotales
Crot.
Percussion
arco