



Francesco Filidei

Notturno sulle corde vuote

per quartetto ed elettronica

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Notturno Sulle Corde Vuote

Technical Rider

This document gives sound information to perform the piece:

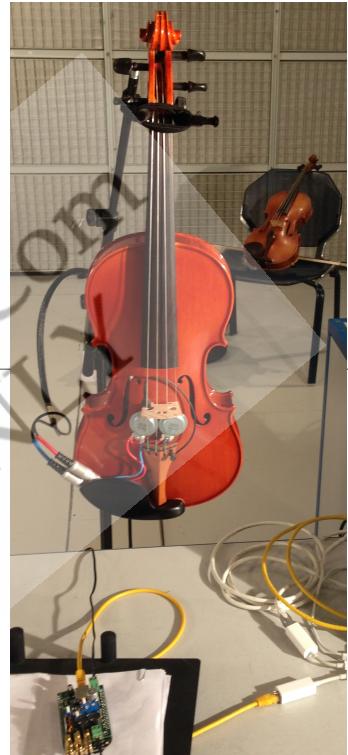
Notturno Sulle Corde Vuote, 2016

Composer: Francesco Filidei

RIM: Greg Beller

Research: SMART instrument, Adrien Mamou-Mani

Sound Engineer: Jérémie Bourgogne



Audio setup

Speaker setup

The major information / novelty / technical interest of this work is that it is using the first versions of smart string quartet, coala V1. That means that the piece need these systems (4 little computer) to be performed. Other coala version could be used but with no warranty of the connections made with the global computer. There is no need for additional speakers.

Each instrument of the quartet is equipped with a piezo mic in the chevalet and 2 transducers near by the chevalet.

Coala <-> SoundBoard <-> Fireface UCX + Computer

As usual. The very difference is that the sound inputs are coming from the coalas and the output of the soundboard is going to the coalas. Let's say a coala is a plug'n'play instrument that involve the wood part of the instrument as well. There is one coala for each of the instrument: Violin1, Violon2, Alto and Cello.

Coala:

Note that the sound coming from the coala (piezo mics in the chevalet) is the sound taken more or less at the string. It can be perceived as phasy and noisy, even saturated. But so is the sound in the string. The setting of the pre-amp on the coala is of most importance and can be tricky because the course of the potentiometer does not match very well the course of the pre-amp.

Here is a scheme to adjust the potentiometers of the coala:

- Turn all coala output potentiometer to the maximum value.
- Start to play fortississimo on the instrument.
- Turn up gently the input potentiometer while listening to the sound till it starts to become really saturated.
- Go back and stop before the saturation.
- Then, at the soundboard, adjust the gain so as to provide to the computer an homogeneous quartet.

SoundBoard

Nothing especially at this level. No need to set up delays, so a analogical board is OK.

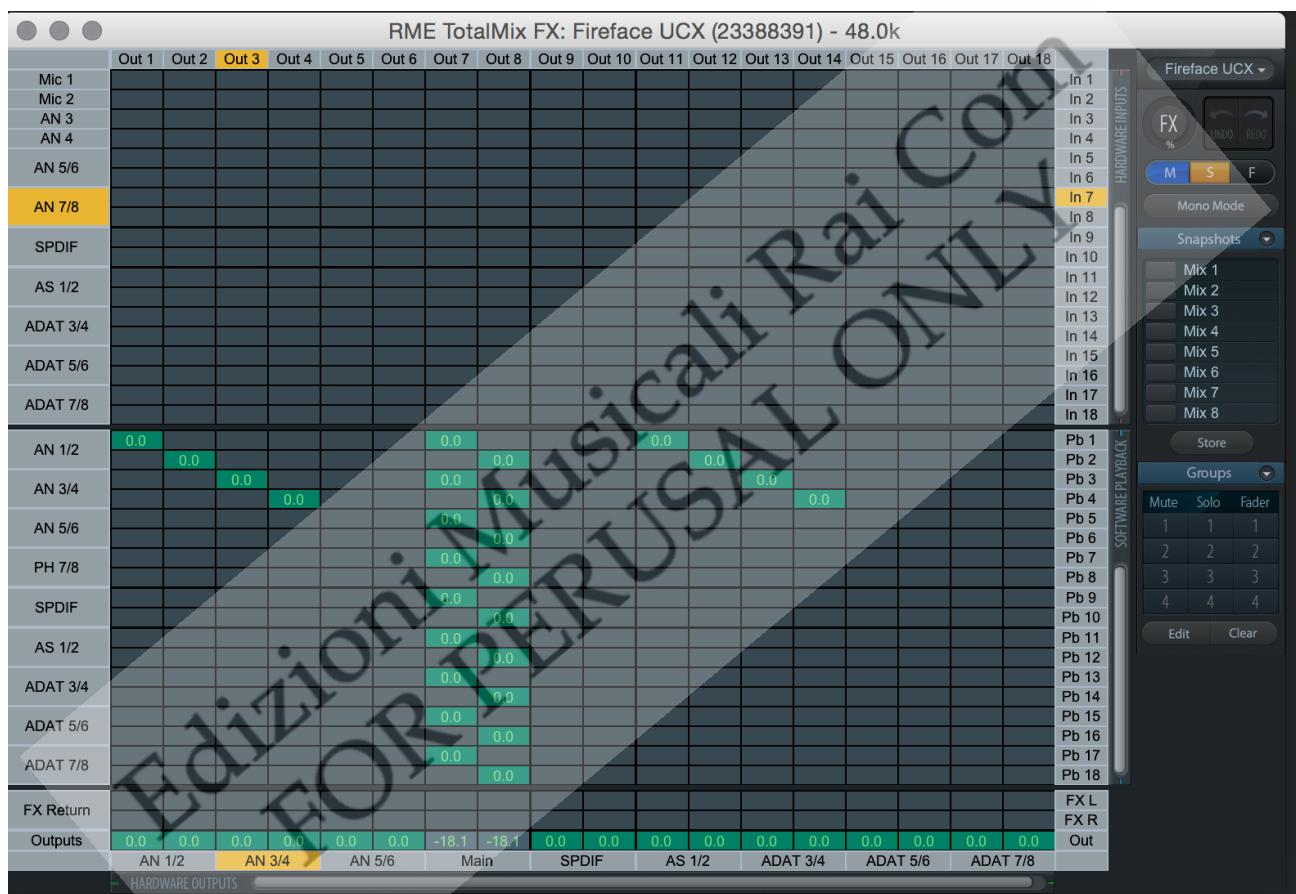
Input: 4 instruments coming from the 4 coalas + 4 computer input

Output: 4 instruments going out the 4 coalas + 4 computer output

(+ spare)

Fireface UCX

Nothing complicated. It can be Digital or Analogical connections.

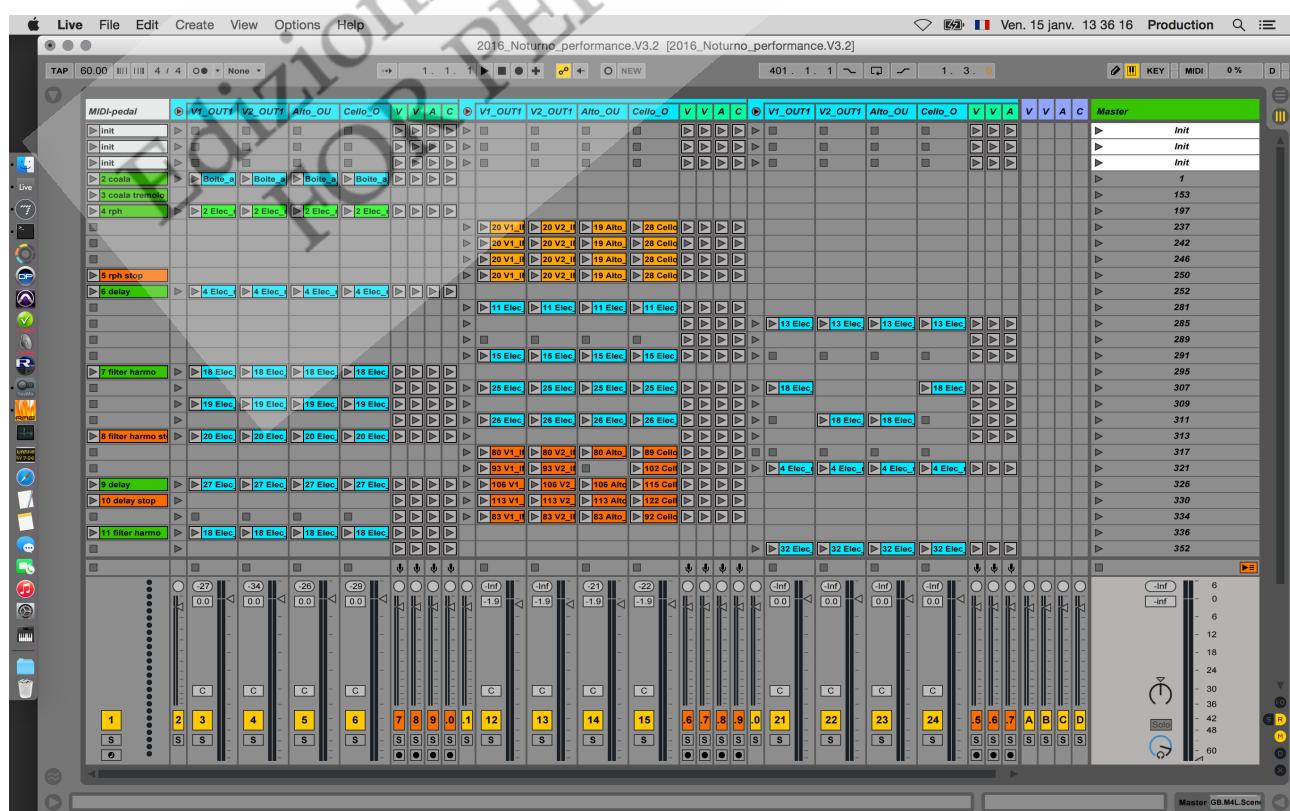
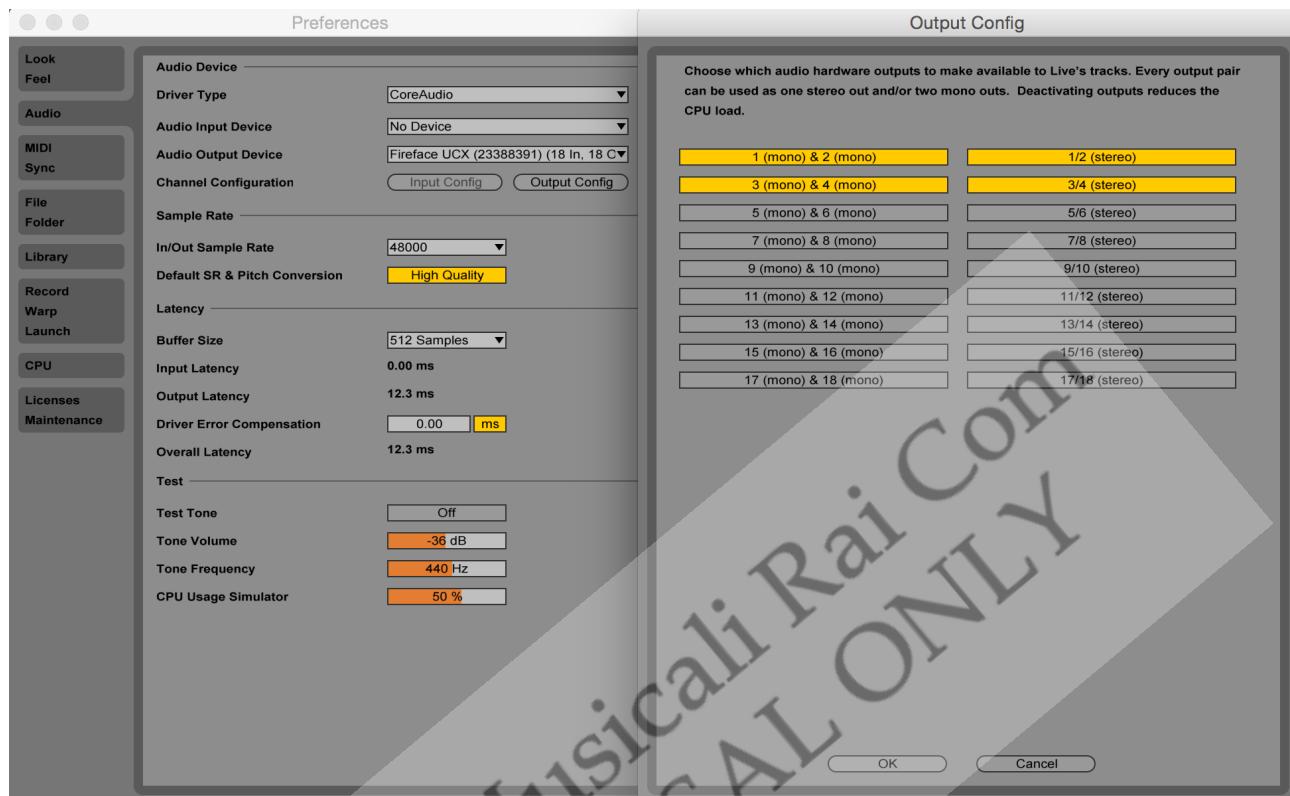


Computer

The performance uses (main computer only):

- 4 Terminal
- 1 Ableton live 9.5 64bits.
- 1 Max 7.1 64 bits

Live configuration



Max configuration

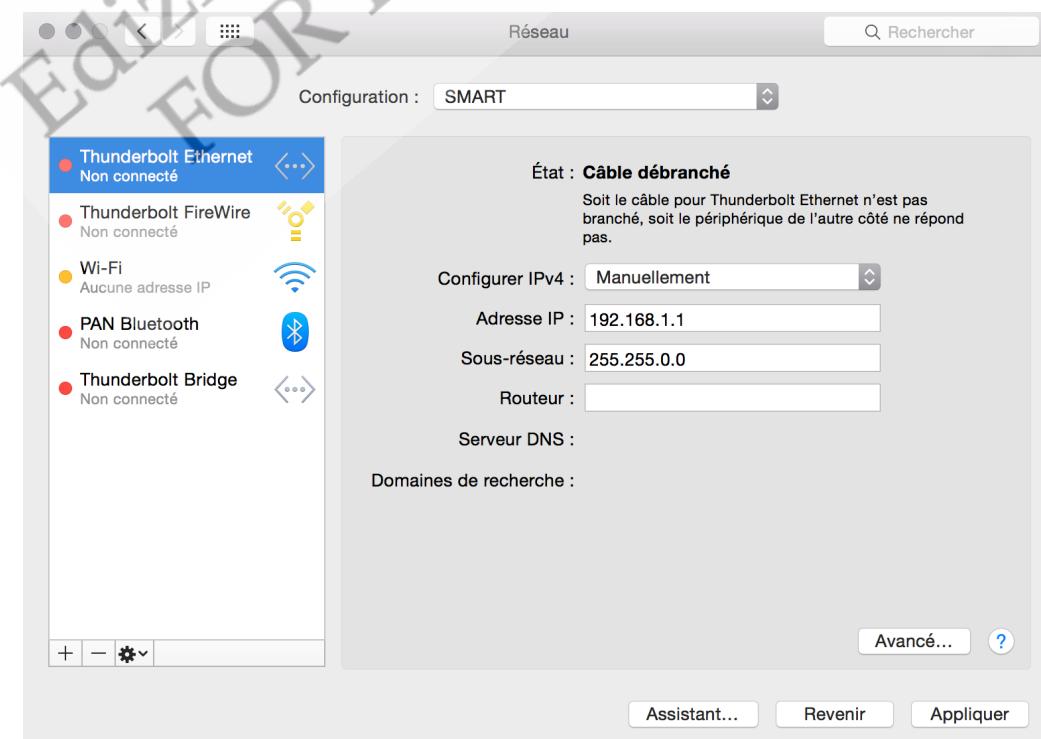


Coala configuration

A router is needed to address the 4 computers (coalas) from the main computer.
 The main computer has to be network configured like this:

IP adress: 192.168.1.1

Network: 255.255.0.0



Then for each of the instruments you have to log on the coala using ssh and then, start the coala server program. Messages are addressed using OSC protocol.

Violon1:

`ssh root@192.168.1.11`

no password

`-> coala -oscserver=8001`

Violon2:

`ssh root@192.168.1.12`

no password

`-> coala -oscserver=8002`

Alto:

`ssh root@192.168.1.13`

no password

`-> coala -oscserver=8003`

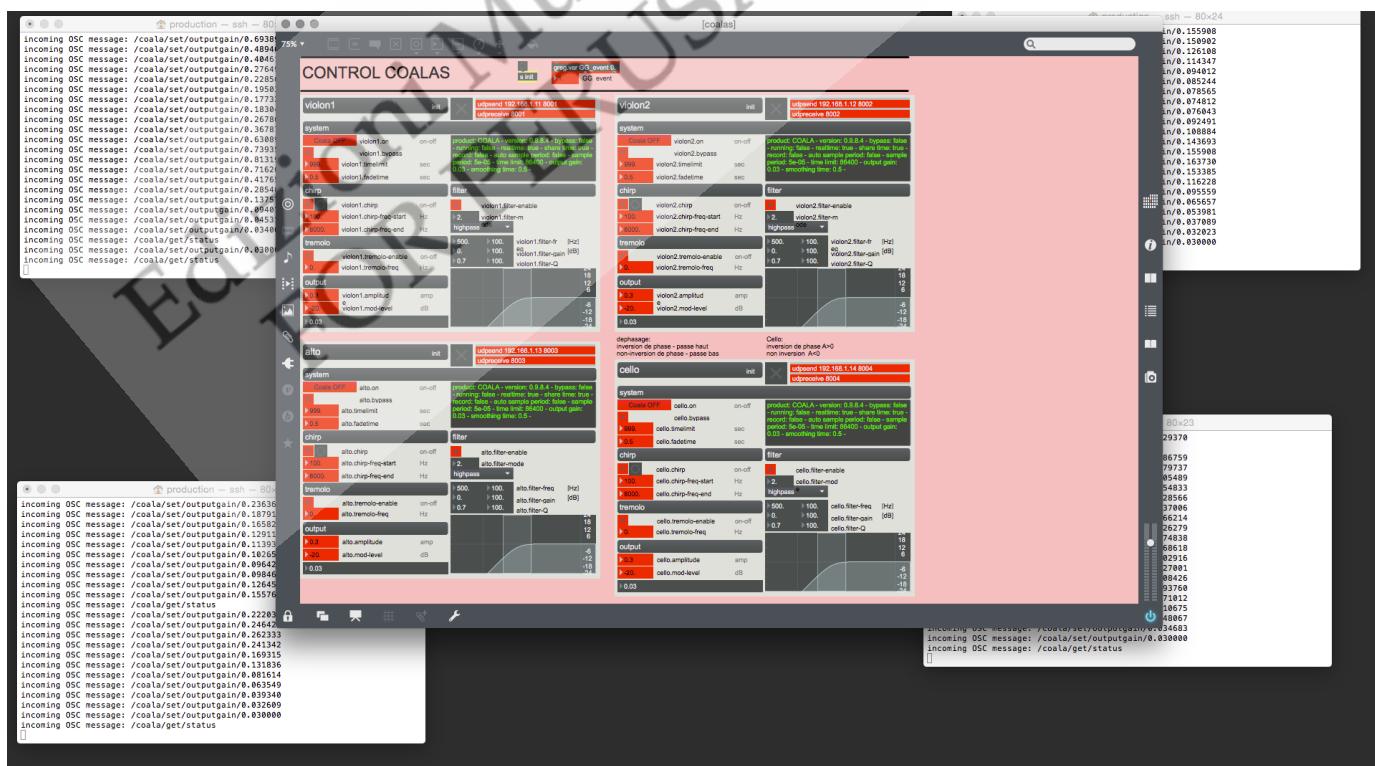
Cello:

`ssh root@192.168.1.14`

no password

`-> coala -oscserver=8004`

Resulting in:



Software interaction (midi setup)

There is a midi pedal on stage. The signal is merged with a BCF2000 (regie) and doubled to attack both spare and main computer (as usual). The pedal triggers scene launch in a Live master session. Live does every samples play. A midi internal channel ("tomax1") is used to take the control over the max msp patch, from the live session. The Max MSP patch is used to process the sound in realtime and to control the coalas using OSC. The BCF2000 control both the coala's effects, the live session and the max msp patch. There is no order in the firing of this softwares...

Software installation

Nothing special here.

The performance uses (main computer only):

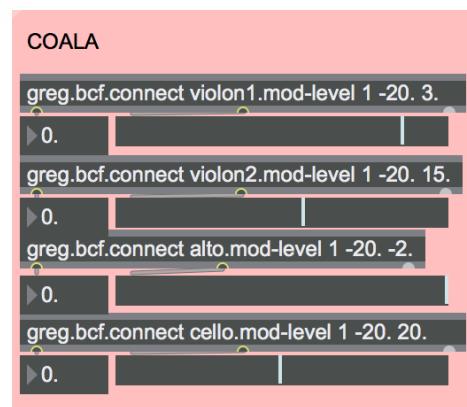
- 4 Terminal
- 1 Ableton live 9.5 64bits.
- 1 Max 7.1 64 bits

Simulation installation

You can use the simulation (pedal and recording of a last rehearsal) BUT! The coalas effect can be felt plainly, only when the instruments are played. Be careful not to work to much with the simulation. The simulation also contains the pedal triggered by the violon2 (with Bela quatuor)

BCF2000 installation

The first fader of the BCF modulates the gain of the coalas. To avoid to produce larsens during the show, it is highly advised to limit the curse of the fader to the best dynamics of the coala effects. To do so, use the vibrato effect and process instrument by instrument. Push the gain until it starts to larsen, mark it (the value) and replace the corresponding value in the sub patcher [bcf-control]. For instance, here is the setting for the premiere. Be careful that all that relies on the previous setting of the pre-amp of the coala that is a bit unreliable. That's why the values (in dB) (3 15 -2 20) are so different



Initialization routine

- 1: Chirp - Koala
Trigger chirps using max interface (bang next to chirp)
- 2: Ouptut - test ecoute
Put a sound to be played with the live session (last scene)
- 3: input - check volume and Max
Instrumentalists play fortissimo one after the other
- 4: test effet MaxMSP
Try the delay FX to test the pipes
- 5: test effet coala tremolo
Try the max events 2 and 3 with vibrato effect and turn gently the gain of the coala on (fader 1 on the BCF2000)
- 6: Tune in instruments
Play the last scene (accord) to allow the instrumentalists to tune up onto the recorded tuning

Performance notes

You can adjust the global volume on the citation (Measure 317). They should sound as if they were played. So you can ask the instrumentalists to play it and play it afterwards (or meanwhile) to adjust the global volume of the electronic.

The Scene are indexed by the measure. There is no off-beat pedal, every pedals are on the first beat.

The piece is all in nuance and the electronic effect should remain behind the instrumental play.

You can easily modulate the effects with the BCF2000 to make them more dynamic.

Follow the score.

In rehearsal, you can start back from every measure. Just trigger manually what you left behind.

Enjoy ;-)

Master	
►	<i>Init</i>
►	<i>Init</i>
►	<i>Init</i>
►	1
►	153
►	197
►	237
►	242
►	246
►	250
►	252
►	281
►	285
►	289
►	291
►	295
►	307
►	309
►	311
►	313
►	317
►	321
►	326
►	330
►	334
►	336
►	352
►	361
►	366
►	391
►	416
►	<i>Fin</i>
►	accord

For any questions: beller@ircam.fr

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a François Bernard Mâche

Francesco Filidei
Notturno sulle corde vuote

$\text{♩} = \text{c. } 60$

Per Quartetto ed elettronica

Violin I

Violin II

Viola

ELETTRONICA:
SUONI SECCHI
DI CARILLON

Cello

White noise only, on the bridge

(Tremolo serratissimo)

White noise only, on the bridge

(Tremolo serratissimo)

pppp

pppp

5

Vln. I

Vln. II

Vla.

Vc.

ppp

pppp

pppp

9

Vln. I

Vln. II

Vla.

Vc.

pppp

ppp

13

Highest sound, on the bridge

Vln. I

Vln. II

Vla.

Vc.

(Tremolo serratissimo)

ppp

< ppp >

pppp

17

Vln. I Vln. II Vla. Vc.

21

Vln. I Vln. II Vla. Vc.

25

Vln. I Vln. II Vla. Vc.

29

Vln. I Vln. II Vla. Vc.

33

Vln. I

Vln. II

Vla.

Vc.

37

Vln. I

Vln. II

Vla.

Vc.

41

Vln. I

Vln. II

Vla.

Vc.

ELETTRONICA:
VIBRATI INVERSIONE
DI FASE

45

Vln. I

Vln. II

Vla.

Vc.

Musical score for orchestra, page 49. The score includes parts for Vln. I, Vln. II, Vla., and Vc. The Vln. I part starts with a dynamic of 'ff'. The Vln. II part has dynamics 'fff' and 'pppp'. The Vla. part has dynamics 'pppp' and 'pppp'. The Vc. part has a dynamic of 'pppp'. The score features vertical bar lines and measures with 3/8 time signature.

53

Vln. I
Vln. II
Vla.
Vc.

ff *ppp*
ffff *pppp*
MSP AST MSP
3
pppp
pppp
pppp
pppp
ppp

57

Vln. I

Vln. II

Vla.

Vc.

AST MSP AST MSP AST MSP

pppp

pppp

pppp

pppp

ppp

Musical score for orchestra, page 61, measures 1-2. The score includes parts for Vln. I, Vln. II, Vla., and Vc. The key signature changes from $\text{F} \#$ to G . The time signature changes from $\frac{3}{8}$ to $\frac{4}{8}$. The string section plays eighth-note patterns labeled AST and MSP. The bassoon part consists of sustained notes with grace notes.

65

Vln. I

Vln. II

Vla.

Vc.

69

Vln. I

Vln. II

Vla.

Vc.

73

Vln. I

Vln. II

Vla.

Vc.

77

Vln. I

Vln. II

Vla.

Vc.

81

Vln. I

Vln. II

Vla.

Vc.

simile...

$\frac{5}{8}$

$\frac{6}{8}$

85

Vln. I

Vln. II

Vla.

Vc.

MSP → AST → MSP

$\frac{6}{8}$

$\frac{5}{8}$

$\frac{6}{8}$

$\frac{5}{8}$

MSP

89

Vln. I

Vln. II

Vla.

Vc.

White noise only, on the bridge

$\frac{5}{8}$

$\frac{5}{8}$

$\frac{5}{8}$

$\frac{5}{8}$

AST → MSP → AST → MSP

$\frac{5}{8}$

$\frac{5}{8}$

93

Vln. I

Vln. II

Vla.

Vc.

$\frac{5}{8}$

$\frac{5}{8}$

$\frac{5}{8}$

$\frac{5}{8}$

$\frac{5}{8}$

$\frac{5}{8}$

$\frac{5}{8}$

$\frac{5}{8}$

97

Vln. I Vln. II Vla. Vc.

101

Vln. I Vln. II Vla. Vc.

105

Vln. I Vln. II Vla. Vc.

109

Vln. I Vln. II Vla. Vc.

113

Vln. I

Vln. II

Vla.

Vc.

8

8

8

8

A musical score page featuring four staves for string instruments. The top staff is for Violin I (Vln. I), the second for Violin II (Vln. II), the third for Cello (Vcl.), and the bottom for Bass (Vcl.). The score is numbered 117 at the top left. Measure 117 starts with a 3/8 signature. Violin I has a grace note followed by two eighth notes with a '3' below them. Violin II has a grace note followed by three eighth notes with a '3' above them. Cello has a grace note followed by two eighth notes. Bass has a grace note followed by two eighth notes. Measures 118 start with a 4/8 signature. Violin I has a grace note followed by four eighth notes with a '3' below them. Violin II has a grace note followed by four eighth notes with a '3' above them. Cello has a grace note followed by four eighth notes. Bass has a grace note followed by four eighth notes. All parts use dynamic markings like pppp throughout the measures.

121 MSP → AST → MSP *simile...*

Vln. I

Vln. II

Vla.

Vc.

125

Vln. I

Vln. II

Vla.

Vc.

129

Vln. I Vln. II Vla. Vc.

133

Vln. I Vln. II Vla. Vc.

137

Vln. I Vln. II Vla. Vc.

141

Vln. I Vln. II Vla. Vc.

145

Vln. I Vln. II Vla. Vc.

149

Vln. I Vln. II Vla. Vc.

153

Vln. I Vln. II Vla. Vc.

157

Vln. I Vln. II Vla. Vc.

161

Vln. I Vln. II Vla. Vc.

165

Vln. I Vln. II Vla. Vc.

169

Accelerando...

Vln. I Vln. II Vla. Vc.

173

Ritardando...

Accelerando...

Vln. I Vln. II Vla. Vc.

177

Vln. I
Vln. II
Vla.
Vc.

Ritardando...

181

Sempre un poco accel... e rubato

Vln. I
Vln. II
Vla.
Vc.

185

Vln. I
Vln. II
Vla.
Vc.

189

Vln. I
Vln. II
Vla.
Vc.

193 *Ritardando...*

Vln. I
Vln. II
Vla.
Vc.

197 *Andante mosso*
MSP

Vln. I
Vln. II
Vla.
Vc.

Legato, molto al ponticello, cercando gli armonici.

**ELETTRONICA:
ARMONICI**

201

Vln. I
Vln. II
Vla.
Vc.

ppp

ppp

ppp

ppp

205

Vln. I
Vln. II
Vla.
Vc.

ppp

ppp

ppp

ppp

209

Vln. I
Vln. II
Vla.
Vc.

213

Vln. I
Vln. II
Vla.
Vc.

217

Vln. I
Vln. II
Vla.
Vc.

221

Vln. I
Vln. II
Vla.
Vc.

225

Vln. I

Vln. II

Vla.

Vc.

229

Vln. I

Vln. II

Vla.

Vc.

233

Vln. I

Vln. II

Vla.

Vc.

237

Vln. I

Vln. II

Vla.

Vc.

241

Vln. I
Vln. II
Vla.
Vc.

245

Vln. I
Vln. II
Vla.
Vc.

249

Muovendo... Agitato $\text{d} = \text{c. } 60$

Vln. I
Vln. II
Vla.
Vc.

253

ELETTRONICA:
SOFFI FLAUTATI

Vln. I
Vln. II
(Tremolo serratissimo)
Vla.
Vc.

257

Vln. I Vln. II Vla. Vc.

261

Vln. I Vln. II Vla. Vc.

265

Vln. I Vln. II Vla. Vc.

269

Vln. I Vln. II Vla. Vc.

273

Vln. I
Vln. II
Vla.
Vc.

277

Vln. I
Vln. II
Vla.
Vc.

281

Vln. I
Vln. II
Vla.
Vc.

284

Vln. I
Vln. II
Vla.
Vc.

287

Vln. I
Vln. II
Vla.
Vc.

290

Vln. I
Vln. II
Vla.
Vc.

293

Allegro con brio

Vln. I
Vln. II
Vla.
Vc.

296

N → ST → Pont.
N → ST → Pont.
N → ST → Pont.
N → ST → Pont.

Vln. I
Vln. II
Vla.
Vc.

300

Vln. I *Al tallone* N ST ff N fff ff
Vln. II *Al tallone* N ST ff
Vla. *Al tallone* N ST ff
Vc. *Al tallone* N ST ff

304

Vln. I ff fff ff
Vln. II ff fff ff
Vla. fff ff ff ff
Vc. fff ff fff ff

308

Vln. I AST Anche col legno battuto... ff
Vln. II AST Anche col legno battuto... ff
Vla. AST Anche col legno battuto... ff
Vc. AST Anche col legno battuto... ff

312

Vln. I ff mf f mf
Vln. II ff mf f mf
Vla. ff mf f mf
Vc. ff mf f mf

Rallentando molto...

316 *Lunga*

Allegro assai. $\text{♩} = \text{c. } 60$ (alla danza tedesca)

Vln. I
Vln. II
Vla.
Vc.

Allegretto gioiale $\text{♩} = \text{c. } 100$

321 *ff*

Allegretto $\text{♩} = \text{c. } 176$

PARTE REGISTRATA

Vln. I
Vln. II
Vla.
Vc.

Agitato $\text{♩} = \text{c. } 60$

N
f — *p*
N
f — *p*
N
f — *p*
N
f — *mf*
N
f — *f*

325 **Rit...**

Andante Mesto $\text{♩} = \text{c. } 60$ **PARTE REGISTRATA**

Rit...

Vln. I
Vln. II
Vla.
Vc.

Agitato $\text{♩} = \text{c. } 60$

pp dolce
pp dolce
pp dolce
pp dolce
ff
ff
ff
ff

329

Allegretto $\text{♩} = \text{c. } 176$

Vln. I
Vln. II
Vla.
Vc.

Andante Mesto $\text{♩} = \text{c. } 60$

dolce
pp
pp
mp

Allegretto gioiale $\text{♩} = \text{c. } 100$

dolce
pp
sfz pp
dolce
pp

Allegro assai.

♩ = c. 60 (alla danza tedesca)

PARTE REGISTRATA

Allegro con brio

333

Vln. I f

Vln. II mf

Vla. mf

Vc. mf p

337

Vln. I

Vln. II

Vla.

Vc.

341

Vln. I pp

Vln. II pp

Vla. pp

Vc. pp

N ST

f N p ST

f N p ST

f N p ST

f N p

346

Vln. I ff N mp ST

Vln. II ff N mp ST

Vla. ff N mp ST

Vc. ff mp

N fff N mp mf mp f

N fff N mp mf mp f

N fff mp mf mp f

ffff mp mf mp f

350

Vln. I *mp ff mp fff mf ffff*

Vln. II *mp ff mp fff mf ffff*

Vla. *mp ff mp fff mf ffff*

Vc. *mp ff mp fff mf ffff mf*

354 Saturated

Vln. I Saturated

Vln. II Saturated

Vla. Saturated

Vc. Saturated

358

Vln. I *mf ffff*

Vln. II *fff ffff*

Vla. *fff ffff*

Vc. *fff ffff*

362

d = c. 60

Vln. I *mf*

Vln. II *mp*

Vla. *3/8 4/8*

Vc. *3/8 4/8*

From here, playing softer and softer
the notes below the dashed line, then
little by little imitate the movement
of playing and stop playing at all.

PARTE REGISTRATA

366

Vln. I

Vln. II

Vla. K 4

Vc. C: 4

From here, playing softer and softer
the notes below the dashed line, then
little by little imitate the movement
of playing and stop playing at all.

370

Vln. I

Vln. II

Vla. K

Vc. C:

374

Vln. I

Vln. II

Vla. K

Vc. C:

378

Vln. I

Vln. II

Vla. K 4

Vc. C: 4

382

Vln. I *ppp*

Vln. II

Vla.

Vc. *< pp >* *pp* *ppp*

58

386

Vln. I *pppp*

Vln. II *< pp >*

Vla.

Vc. *< ppp >* *ppp* *< ppp >* *ppp*

390

Vln. I *pppp*

Vln. II *pp*

Vla.

Vc. *>* *< ppp >* *< ppp >* *< ppp >*

394

Vln. I

Vln. II

Vla.

Vc. *< ppp >* *ppp* *< ppp >* *< ppp >*

398

Vln. I

Vln. II

Vla.

Vc.

pppp

ppp

Detuning the IV string.

ppp

Detuning the II string.

ppp

402

Vln. I

Vln. II

Vla.

Vc.

pppp

ppp

406

Vln. I

Vln. II

Vla.

Vc.

pppp

410

Vln. I

Vln. II

Vla.

Vc.

pppp

ppp

pppp

ppp

414

Vln. I

Vln. II

Vla.

Vc.

pppp

pppp

pppp

pppp

PARTE REGISTRATA

pppp

pppp

pppp

PARTE REGISTRATA

From here, playing softer and softer the notes below the dashed line, then little by little imitate the movement of playing and stop playing at all.

From here, playing softer and softer the notes below the dashed line, then little by little imitate the movement of playing and stop playing at all.

little by little imitate the movement
of playing and stop playing at all.

426

Vln. I

Vln. II

Vla.

Vc.

430

Vln. I
Vln. II
Vla.
Vc.

434

Vln. I
Vln. II
Vla.
Vc.

438

Vln. I
Vln. II
Vla.
Vc.

442

Vln. I
Vln. II
Vla.
Vc.

446

Vln. I
Vln. II
Vla.
Vc.

3/8
2/8
3/8
2/8

< pppp >

450

Vln. I
Vln. II
Vla.
Vc.

3/8
2/8
3/8
2/8

< pppp >

454

Vln. I
Vln. II
Vla.
Vc.

3/8
2/8
3/8
2/8

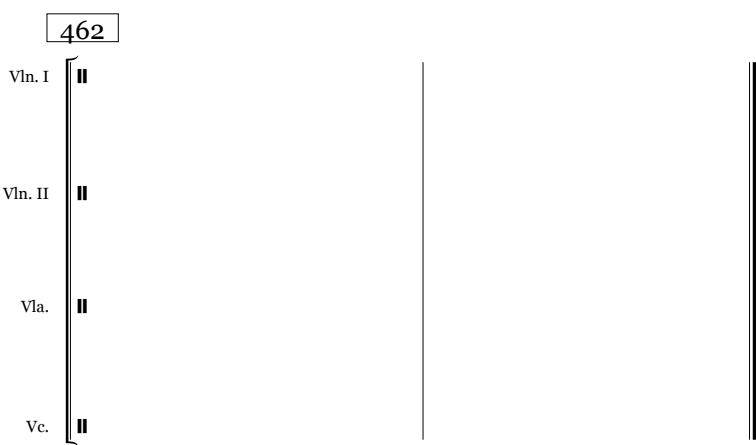
< pppp >

458

Vln. I
Vln. II
Vla.
Vc.

3/8
2/8
3/8
2/8

< pppp >



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