

Philippe Manoury  
*Partita II*  
2012  
Renater  
2013



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The setup and the execution of the electroacoustic part  
of this work requires a Computer Music Designer (Max expert).

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## Work related information

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### Performance details

- July 21, 2012, France, Briançon, Église des Cordeliers, Festival Messiaen au Pays de la Meije

Publisher : Durand

### Detailed staff

- violin

### Realisation

- Serge Lemouton

### Useful links on Brahms

- [Partita II for violin and electronics \(2012\), 17mn](#)
- [Philippe Manoury](#)

## Version related information

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Performance date: Feb. 5, 2013

Documentation date: Feb. 8, 2013

Version state: valid, validation date : May 3, 2018, update : May 6, 2021, 3:09 p.m.

### Documentalist

You noticed a mistake in this documentation or you were really happy to use it? Send us feedback!

### Realisation

- Philippe Manoury (Composer)
- Serge Lemouton (Computer Music Designer)
- Sylvain Cadars (Sound engineer)

Version length: 21 mn

Default work length: 17 mn

### Upgrade Motivation

A quick clean-up at the occasion of a performance of Partita 2 for Renater birthday party

### Other version(s)

- [Philippe Manoury - Partita II - Max8 2021 \(Aug. 5, 2021\)](#)
- [Philippe Manoury - Partita II - La Meije 2019 \(Sept. 13, 2019\)](#)
- [Philippe Manoury - Partita II - CollegeDeFrance2017 \(June 17, 2017\)](#)
- [Philippe Manoury - Partita II - Musica-2014 \(Oct. 13, 2014\)](#)
- [Philippe Manoury - Partita II - premiere \(Oct. 7, 2012\)](#)

## Electronic equipment list

### Computer Music Equipment

- 1 MacBook Pro - *Apple Laptops* (Apple)
- 1 Max 5 - *Max* (Cycling74)  
version 5.1.9
- 1 Fireface 800 - *Sound Board* (RME)
- 1 BCF 2000 - *MIDI Mixer* (Behringer)

### Audio Equipment

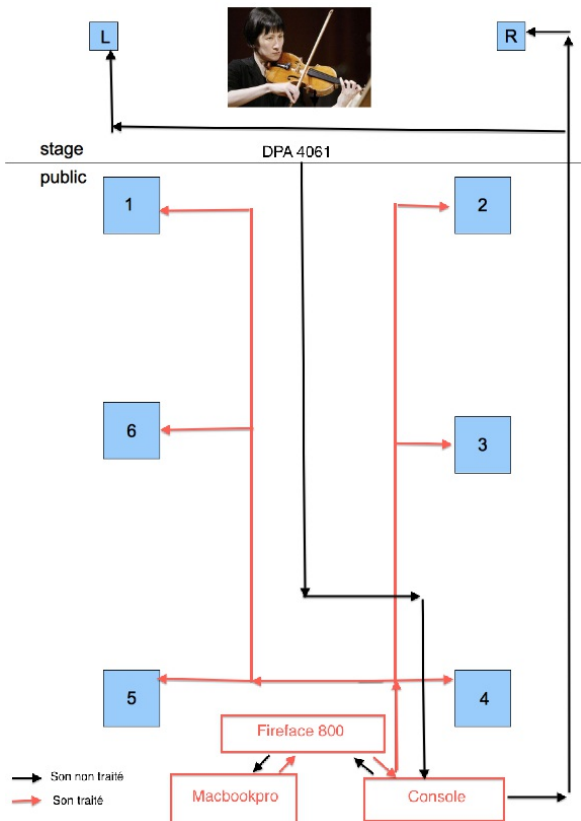
- 1 DPA 4061 - *Condenser Microphones* (DPA)
- 6 Loudspeaker Line - *Monitors and Loudspeakers*
- 1 subwoofer - *Subwoofers*

**Files**

File	Type	Author(s)	Comment
<a href="#">Cordeliers-V2_partita2.pdf</a>	Setup	Sylvain Cadars	Loudspeaker setup used for the premiere in Briançon's church
<a href="#">Manoury_PartitaII_HSK_CordelierMeije_21072012.aiff</a>	Recording(s)	Hae Sun Kang	Radio-France recording of the premiere
<a href="#">PARTITA2-multitrackProject.zip</a>	Recording(s)	Serge Lemouton	Multitrack recording of the DAC, for reference or future portings
<a href="#">Partita2.dmg</a>	Patch	Serge Lemouton	Contains all the max patches and applications to perform the piece
<a href="#">Partita II_partition.pdf</a>	Score	Serge Lemouton	

# Instructions

## Audio and Loudspeaker setup



## Software installation

For performance reasons, 5 different patches are running simultaneously on the same computer to play the electronic part of *Partita 2* :

1. *Partita-Deux-13.maxpat*: Main patch. It has got the interface of antescofo
2. *P2\_3fc-06.maxpat*: "three frequencies chord" synthesis generated with some continuous sound analysis of the violin
3. *P2\_synful\_00b*: Synful synthesis used to play some automatic sequences of notes
4. *P2\_spat\_01b*: 6 channels spatialisation
5. *P2\_string\_02b*: Two virtual physical modeled strings synthesis

The *P2\_synful\_00b*, *P2\_spat\_01b* and *P2\_string\_02b* patches should be used in their application form.

Optionnally, you can start all the required application and patch by executing the *run\_p2b.sh* script in the terminal.

**Warning:** don't launch *P2\_spat\_01b* and another application at the same time

### files preferences:

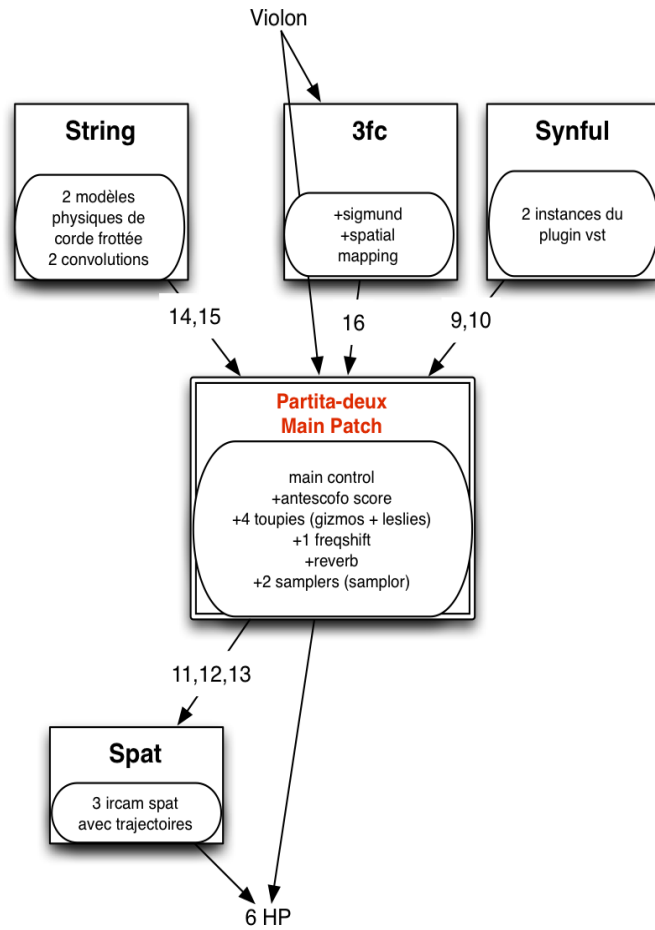
MaxMsp file preferences should point to :

- /PartitaDue-max-RENATER/\*
- /PartitaDue-max-RENATER/data/antescofo\_scores

File Preferences				
#	Name	Path		Subfolders
2	Examples	./examples		<input checked="" type="checkbox"/>
1	Patches	./patches		<input checked="" type="checkbox"/>
4	userpath_4	<input type="button" value="Choose..."/> Macintosh HD:/Users/production/Desktop/PartitaDue-max-RENATER		<input checked="" type="checkbox"/>
3	userpath_3	<input type="button" value="Choose..."/> Macintosh HD:/Users/production/Desktop/PartitaDue-max-RENATER/data/antescofo_scores		<input checked="" type="checkbox"/>

### DSP Overview:

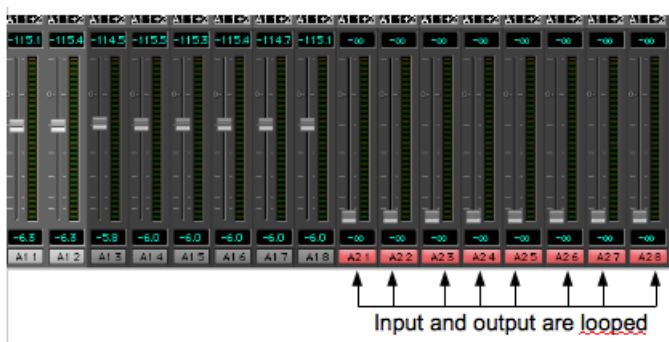
This diagram shows the audio routing between the applications:



The audio lines from 9 to 16 are used to communicate between the different applications, so the inputs should be connected to the outputs of the audio soundboard.

You can do it :

- with an optical fiber loop.
- or in the fireface software, do ctrl + click on the name of the track. It will become pink:



The patches (or applications) communicate via Open Sound Control commands through network (UDP) messages and with audio via optic fiber link on the audio card.

**DSP status and IOSetup:**

The IO mappings for each application are shown below:

**Max:**



The screenshot shows two windows: [DSP Status] and [I/O Mappings].

**[DSP Status] DSP**

- Audio: On
- Driver: CoreAudio Fireface 800 (..)
- Input Device: Fireface 800 (48C)
- Input Source: [empty]
- Output Destination: [empty]
- Playthrough Input: Unsupported
- I/O Vector Size: 1024
- Signal Vector Size: 128
- Sampling Rate: 44100 Hz
- Scheduler in Overdrive:  In Audio Interrupt:
- CPU Utilization (%): 12.0
- CPU Limit (%): 0
- Signals Used: 96
- Function Calls: 483
- Vector Optimization:
- Input Channels: 28
- Output Channels: 28
- Channel 1: 1 input, 1 output
- Channel 2: Off, 2 output

**[I/O Mappings]**

Chan. Group	Input Map.	Output Map.
1-16	1-16	1-16
1	1 input	1 output
2	Off	2 output
3	Off	3 output
4	Off	4 output
5	Off	5 output
6	Off	6 output
7	7 input	7 output
8	Off	Off
9	21 input	9 output
10	22 input	10 output
11	23 input	11 output
12	24 input	12 output
13	25 input	13 output
14	26 input	14 output
15	27 input	15 output
16	28 input	16 output

**String:**

The screenshot shows two windows: [DSP Status] and [I/O Mappings].

**[DSP Status] DSP**

- Audio: On
- Driver: CoreAudio Fireface 800 (..)
- Input Device: Fireface 800 (48C)
- Input Source: [empty]
- Output Destination: [empty]
- Playthrough Input: Unsupported
- I/O Vector Size: 512
- Signal Vector Size: 64
- Sampling Rate: 44100 Hz
- Scheduler in Overdrive:  In Audio Interrupt:
- CPU Utilization (%): 1.0
- CPU Limit (%): 0
- Signals Used: 9
- Function Calls: 45
- Vector Optimization:
- Input Channels: 28
- Output Channels: 28
- Channel 1: Off, Off
- Channel 2: Off, Off

**[I/O Mappings]**

Chan. Group	Input Map.	Output Map.
1-16	1-16	1-16
1	Off	Off
2	Off	Off
3	Off	Off
4	Off	Off
5	Off	Off
6	Off	Off
7	Off	Off
8	Off	Off
9	Off	Off
10	Off	Off
11	Off	Off
12	Off	Off
13	Off	Off
14	Off	14 output
15	Off	15 output
16	Off	Off

**Synful:**

The screenshot shows two windows: [DSP Status] and [I/O Mappings].

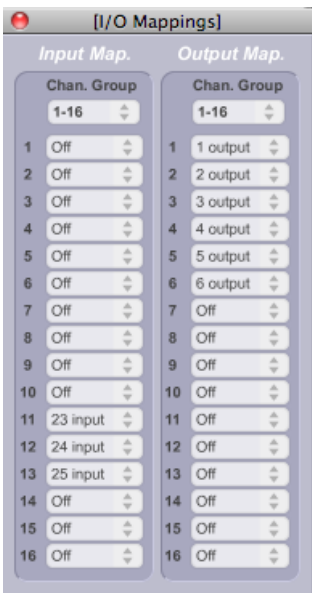
**[DSP Status] DSP**

- Audio: On
- Driver: CoreAudio Fireface 800 (..)
- Input Device: Fireface 800 (48C)
- Input Source: [empty]
- Output Destination: [empty]
- Playthrough Input: Unsupported
- I/O Vector Size: 512
- Signal Vector Size: 64
- Sampling Rate: 44100 Hz
- Scheduler in Overdrive:  In Audio Interrupt:
- CPU Utilization (%): 2.0
- CPU Limit (%): 0
- Signals Used: 9
- Function Calls: 57
- Vector Optimization:
- Input Channels: 28
- Output Channels: 28
- Channel 1: Off, Off
- Channel 2: Off, Off

**[I/O Mappings]**

Chan. Group	Input Map.	Output Map.
1-16	1-16	1-16
1	Off	Off
2	Off	Off
3	Off	Off
4	Off	Off
5	Off	Off
6	Off	Off
7	Off	Off
8	Off	Off
9	Off	9 output
10	Off	10 output
11	Off	Off
12	Off	Off
13	Off	Off
14	Off	Off
15	Off	Off
16	Off	Off

**Spat:**

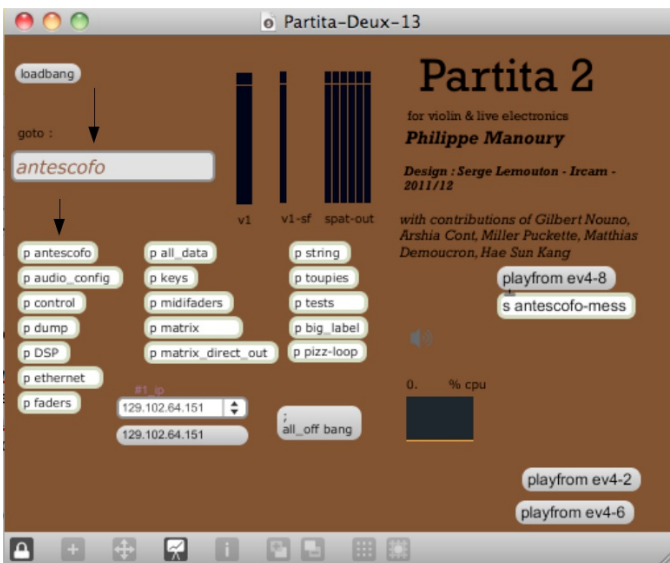


Before using the patch, quit every application to save "DSP status", so "DSP status" will be "on" everytime you open the applications.

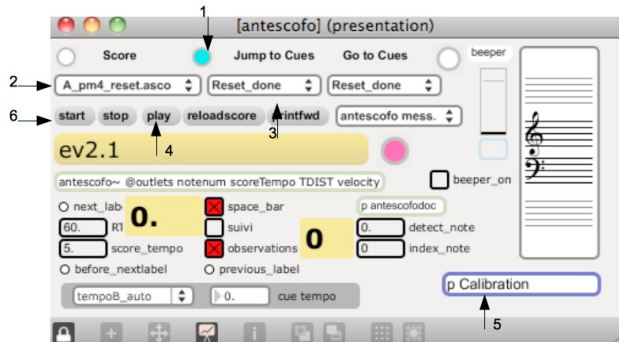
### System calibration and tests

test "antescofo" with the "testrecording" in "p antescofo":

On the main patch "Partita-Deux-13", select "antescofo" in the menu "go to".  
(This menu contains shortcuts for easy access to important subpatches)

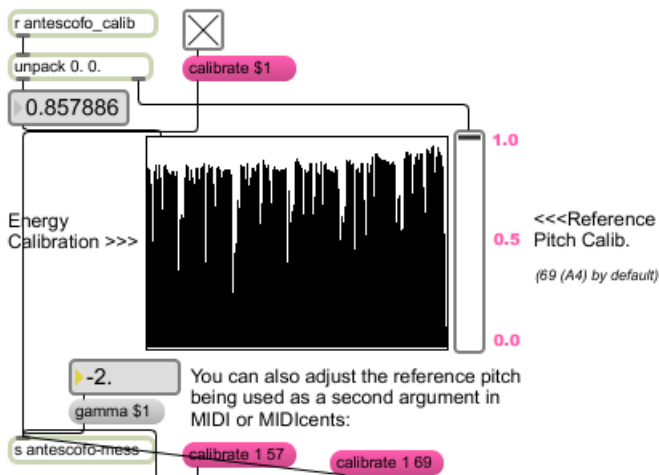


a window appears:



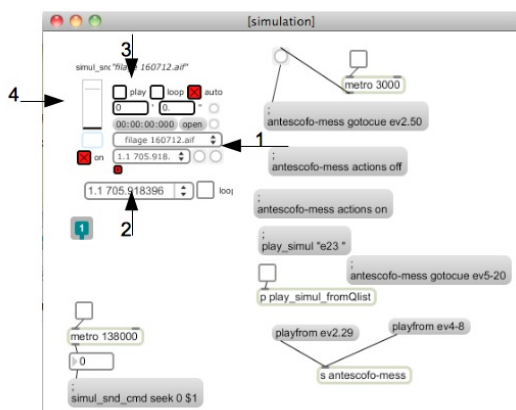
- 1) Click on the bang (Number 1). It resets everything in antescofo.
- 2) Choose a score (for example "Partita-II.1.asco").
- 3) Choose the event you want to go to.
- 4) Click on play and check that it commands all other patches.
- 5) Calibrate antescofo by clicking in the "p calibration" in "p antescofo".  
Check the toggle "Calibrate \$1", the waveform must be close to 1:

## Antescofo - Audio Calibration



## Simulation test:

in "Partita-2-13", choose "simulation" in the "go to" menu.  
This window opens:



We have done 2 recordings of the solo violin part, in "Partita-Due/snd/filage160712" and "Partita-Due/snd/filage170712".

- Start the follower in the antescofo window as it is explained in the "**initialization routine**",
- Choose "filage160712" for example (arrow number 1),
- It will automatically check "play" in the simulation window (number 3), and you will see sound on the meter (number 4).

There are also markers on the recordings called "filage 170712" and "filage 160712".

To begin for example at part 2, number 50 in the score, you can choose it in the window below the file name (number 2).

The simulation violin sound is routed to dac7.

## Initialization routine

Run all the patches (2) and applications (3). (see "**Software installation**")

Open the antescofo window located in the main patch with the "go to" menu.

- Reset antescofo by clicking on the blue button between "score" and "jump to cue" (arrow number 1)
- Choose the score below "score".
- Then you can :
  - "start" (arrow number 6 in **System calibration and tests, test"antescofo"**) if you follow the musician or
  - "play" (arrow number 4 in **System calibration and tests, test"antescofo"**) if you want to play the electronic part alone without following anything.

## Patch presentation

You can stop the follower by unchecking "suivi" and follow evenements manually with the space bar.

## MIDI mixer Setup

Faders of the midi mixer (BCF2000) are programmed to control some parameters during the concert:

```

<td class=""> initial value</td>

<td class=""> ctl</td>

<td>chan </td>
</tr>

```

```

<td>127 </td>

<td>7 </td>

<td>1 </td>
</tr>

<tr>
<td> Direct</td>

<td>100 </td>

<td>7 </td>

<td>2 </td>
</tr>

<tr>
<td> string1</td>

<td>64 </td>

```

```
<td>7 </td>

<td>3 </td>
</tr>

<tr>
  <td> string2</td>

  <td>64 </td>

  <td>7 </td>

  <td>4 </td>
</tr>

<tr>
  <td> 3fc</td>

  <td>64 </td>

  <td class="">7</td>

  <td>5 </td>
</tr>

<tr>
  <td> sampler</td>

  <td>64 </td>

  <td>7 </td>

  <td>6 </td>
</tr>

<tr>
  <td> synful</td>

  <td>64 </td>

  <td>7 </td>

  <td>7 </td>
</tr>

<tr>
  <td> fx<br>
```

(effects level)

```
<td>64 </td>

<td>7 </td>

<td>8 </td>
</tr>
```

fader
Master

## Performance notes


**For the sound engineer:** The violin must be amplified throughout the whole piece except between event I.5 and event I.18 with a crescendo between I.18 and I.19.

**For the Computer Music Designer:** Score following (with antescofo) is automatic in most of this work except :

- at the events II.12, II.22bis, II.39,
- from II.46 to II.48 included,
- II.58, II.59,
- and from II.65 to the end of the second movement

For these events, you should follow manually the instrumentalist (using the space bar).

- In the perpetuum mobile movement (movement4), click on play precisely when the violinist plays the first note, the instrumentalist follows the electronic sequence.
- The follower is on at the beginning of the last movement (until the end of the piece)
- slow fade-out (approximately 15 ") at the end of the piece.

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## Program note

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*Partita II*, pour violon et électronique en temps réel, fait suite aux travaux et recherches que j'ai entrepris sur *Tensio* pour quatuor à cordes et électronique. J'ai voulu approfondir les relations qui peuvent se créer entre les instruments à cordes et les nouvelles lutheries électroniques. Si les outils électroniques utilisés sont semblables à ceux utilisés dans le quatuor, la direction que prend la musique au cours de *Partita II* est très différente. J'ai surtout exploré diverses manières avec lesquelles le violon a le pouvoir d'engendrer plusieurs structures électroniques autonomes qu'il viendra ensuite commenter, contrepointer, puis modifier. Plusieurs couches sonores indépendantes se déroulent simultanément, dans des tempi différents, entre lesquelles le violon navigue. Le soliste est donc l'origine et l'ordonnateur de toute la musique électronique qui l'environne. À la fin de la pièce, le violon reste seul avec une toupie sonore qu'il fait tourner dans l'espace, à la manière d'un prestidigitateur qui jonglerait avec des éléments en suspension dans l'air libre. *Partita II* est dédiée à sa créatrice, la violoniste Hae-Sun Kang.

*Philippe Manoury*

*Note de programme du concert du 16 juin 2017 au Collège de France dans le cadre du festival ManiFeste.*

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