

Michaël Levinas  
*Évanoui*  
2009  
portage 2020  
2020



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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

- March 6, 2009, Radio France, festival Présences

Publisher : Lemoine

### Detailed staff

- 3 flutes (also 2 alto flutes, 1 bass flute [toutes amplifiées] ), 1 tenor saxophone, 1 baritone saxophone, 1 bass saxophone, 2 clarinets, 1 bass clarinet, 2 horns (also 2 snare drums [vibrantes, abouchés aux 2 cors] ), 2 trumpets [abouchées aux deux cors] , 3 tenor trombones with thumb trigger (also 1 bass trumpet [abouchée au tuba] ), 1 tuba, 2 marimbas (also 1 bass drum, 1 tam-tam), 1 fortepiano [type copie Clark 1820 à 435 Hrtz, amplifié] , 2 harp [accordées à 449 hrtz] , 2 guitars [accordées à 458 hrtz, amplifiées] , 5 electronic/MIDI keyboards/synthesizers [3 clavieristes] , 1 piano [accord 442 hrtz] , 1 celesta, 12 violins, 10 second violins, 8 violas, 6 cellos, 4 double basses

### Realisation

- Benoît Meudic

### Useful links on Brahms

- [Évanoui for a double orchestra \(2009\), 20mn](#)
- [Michaël Levinas](#)

## Version related information

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Documentation date: April 6, 2020

Version state: valid, validation date : April 8, 2020, update : May 6, 2021, 3:09 p.m.

### Documentalist

Etienne Demoulin (Etienne.Demoulin@ircam.fr)

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

### Realisation

- Maxime Le Saux (Sound engineer)
- Etienne Démoulin (Computer Music Designer)
- Benoit Meudic (Computer Music Designer)

Version length: 14 mn

Default work length: 20 mn

### Upgrade Motivation

Upgrade for Max8.

Simplification of the patch for distribution.

### Comment

Ported to Max8 but not yet tested in concert

### Other version(s)

- [Michaël Levinas - Évanoui - max6-2013 \(Oct. 31, 2013\)](#)
- [Michaël Levinas - Évanoui - Premiere \(April 14, 2010\)](#)

## Electronic equipment list

### Computer Music Equipment

- 2 MacBook Pro - *Apple Laptops* (Apple)  
Main computer, OS  $\geq$  10.13
- 1 RJ 45 Cable - *Cable*  
for osc communication between computer on stage and main computer
- 2 Max 8 - *Max* (Cycling74)
- 1 Fireface 800 - *Sound Board* (RME)
- 5 KX 88 - *MIDI Keyboard* (Yamaha)
- 1 BCF 2000 - *MIDI Mixer* (Behringer)
- 1 Footswitch / Sustain Pedal - *Footswitch / Sustain Pedal*  
for the 'clavier4'
- 1 Midi interface - *MIDI Interfaces*  
on stage

### Audio Equipment

- 8 Loudspeaker - *Loudspeakers*  
see document LEVINAS\_technique.pdf for repartition
- 1 ear-monitor - *Headphones*  
for click-track (used in the second part of the piece)
- 1 Digital Mixing Desk - *Digital Mixers*

**Files**

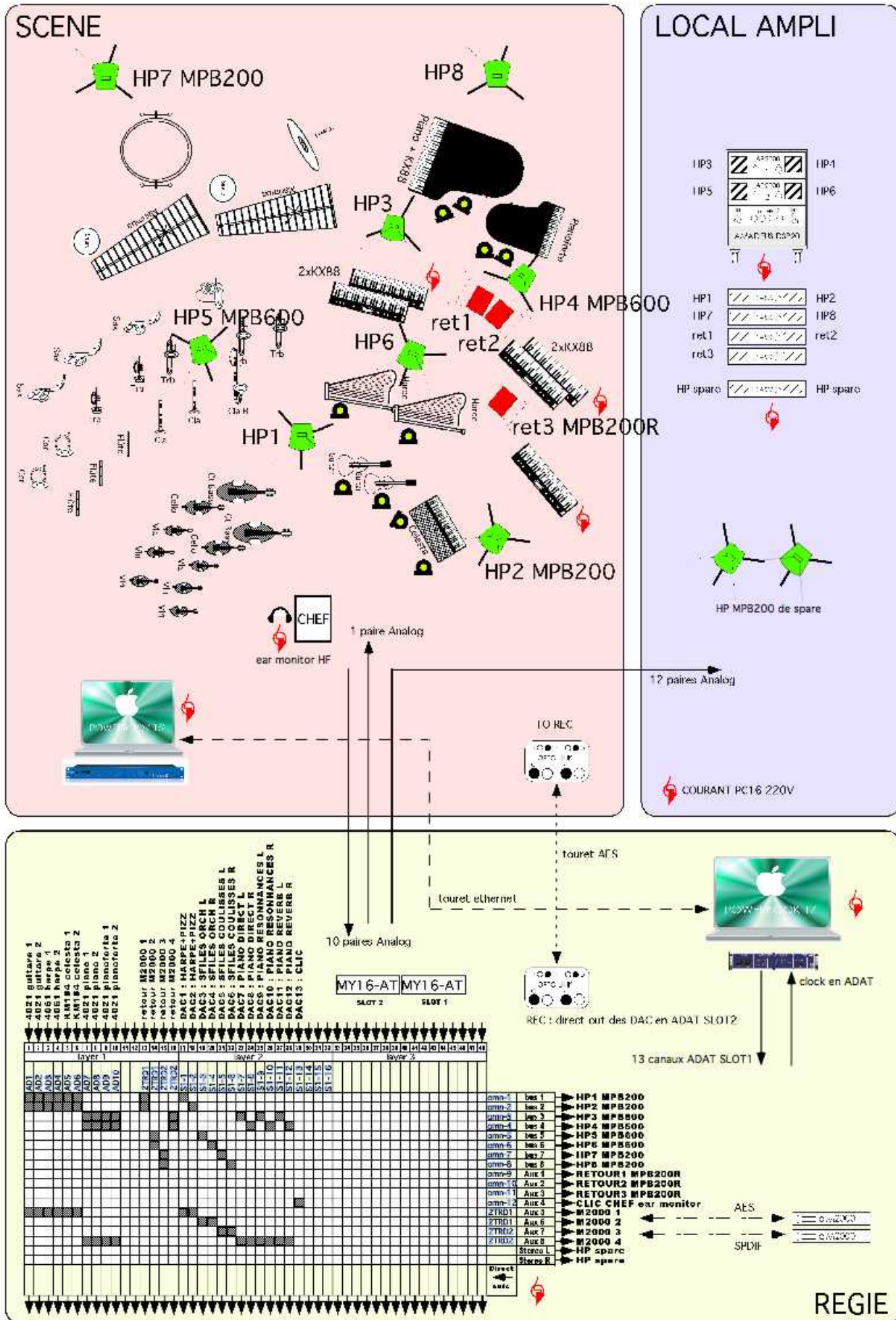
<b>File</b>	<b>Type</b>	<b>Author(s)</b>	<b>Comment</b>
<a href="#">declenchements.pdf</a>	Document		
<a href="#">evanoui-2020.dmg</a>	Patch		

# Instructions

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## Stage setup

The instruments are distributed in two groups (two orchestras). See document [LEVINAS\\_technique.pdf](#) for full information. The disposition that was adopted for the creation was inversed left-right when compared to the document.



**Loudspeakers set-up:**

The disposition of the loudspeakers is provided in the document 'LEVINAS\_technique.pdf'.

HP1 and HP2 are used for amplifying guitars and harps.



HP3 and HP4 are used for the diffusion of midi keyboards (clavier1, clavier3 and clavier4).

HP5 and HP6 are used for soundfiles ‘coming from the orchestra’.

HP7 and HP8 are used for soundfiles ‘coming from the backstage’ (event 84, 106, 123 and 166 - see document ‘repartition-soundfiles.txt’).

### Introduction to the electronic part:

The electronic relies on 5 midi keyboards that trigger orchestral samples and soundfiles. The keyboards are distributed to 3 players:

- ‘clavier1’ plays two keyboard (one for viola pizzicatos samples and one for harp samples)
- ‘clavier3’ plays two keyboards (one for viola pizzicatos samples and one for harp samples)
- ‘clavier4’ plays one keyboard (piano samples and soundfiles).

To trigger to soundfiles, the instrumentist has to keep pressed the highest key (midi 108), then pressing the successive chromatic keys from C4 (midi 60) to A#5 (midi 82) will respectively trigger events (soundfiles) from bar 78 to 181. The score containing the keys that must be played by ‘clavier4’ for triggering soundfiles is not included in the main score. You can edit and print it from the file [evanoui/doc/declenchements.pdf](#). Don’t forget to give it also to the instrumentist and to the conductor.

Note: in the score, ‘clavier2’ is the name for the acoustic piano (442 Hz), and ‘pno’ is the name for the pianoforte

Some instruments also need to be amplified:

orchestra I: pianoforte, guitars, acoustic piano, harps

orchestra II: flutes

### Patches installation:

On the main computer, you must launch:

- ‘\_MAIN\_EVANOU’, this is the main patch. It is used for playing soundfiles and for adding resonances to the ‘clavier4’ (piano samples) signal output.
- set manual IP adress to 192.168.0.1 and submask to 255.255.255.0

On the computer on stage, you must launch 1 patch with Max8:

- ‘evanoui-mergermidi’ converts the midi keyboards input to osc and send the messages to the main computer.
- set manual IP adress to 192.168.0.2 and submask to 255.255.255.0

### Main computer:

#### Inputs/Outputs of the computer:

There are no inputs.

There are 15 outputs: respectively ‘clavier1’ (channels 1-2), ‘sfile orchestre’ (channels 3-4), ‘sfile coulisse’ (channels 5-6), ‘clavier4’ (channels 7-8), ‘clavier4-resonance’ (channel 9-10), ‘clavier4-reverb’ (channel 11-12), ‘clavier2’ (channels 13-14), and ‘click-track’ (channel 15)

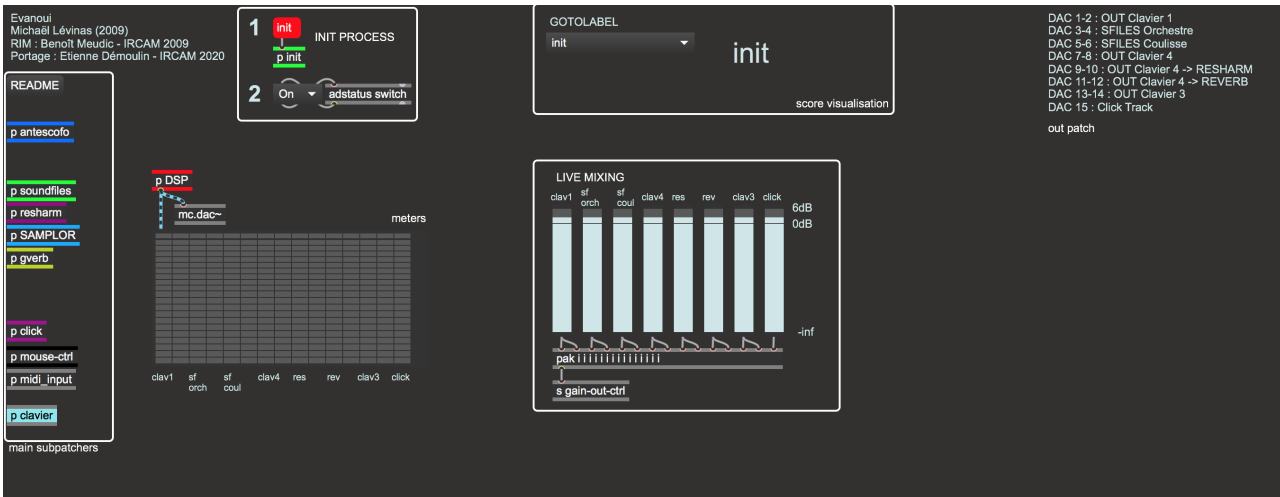
#### Installation:

Copy the folder ‘evanoui’ on your hard disk. Launch Max8, and select this folder (and only this one) in the ‘file preferences’ menu of Max.

In order to test connection between computers, open terminal and type : ping 192.168.0.2. The answer should look as :

```
PRO-2672-Concert:~ etiennedemoulin$ ping 192.168.0.2
PING 192.168.0.2 (192.168.0.2): 56 data bytes
64 bytes from 192.168.0.2: icmp_seq=0 ttl=64 time=26.751 ms
64 bytes from 192.168.0.2: icmp_seq=1 ttl=64 time=75.449 ms
64 bytes from 192.168.0.2: icmp_seq=2 ttl=64 time=91.611 ms
64 bytes from 192.168.0.2: icmp_seq=3 ttl=64 time=107.075 ms
64 bytes from 192.168.0.2: icmp_seq=4 ttl=64 time=121.548 ms
64 bytes from 192.168.0.2: icmp_seq=5 ttl=64 time=6.544 ms
64 bytes from 192.168.0.2: icmp_seq=6 ttl=64 time=28.239 ms
```

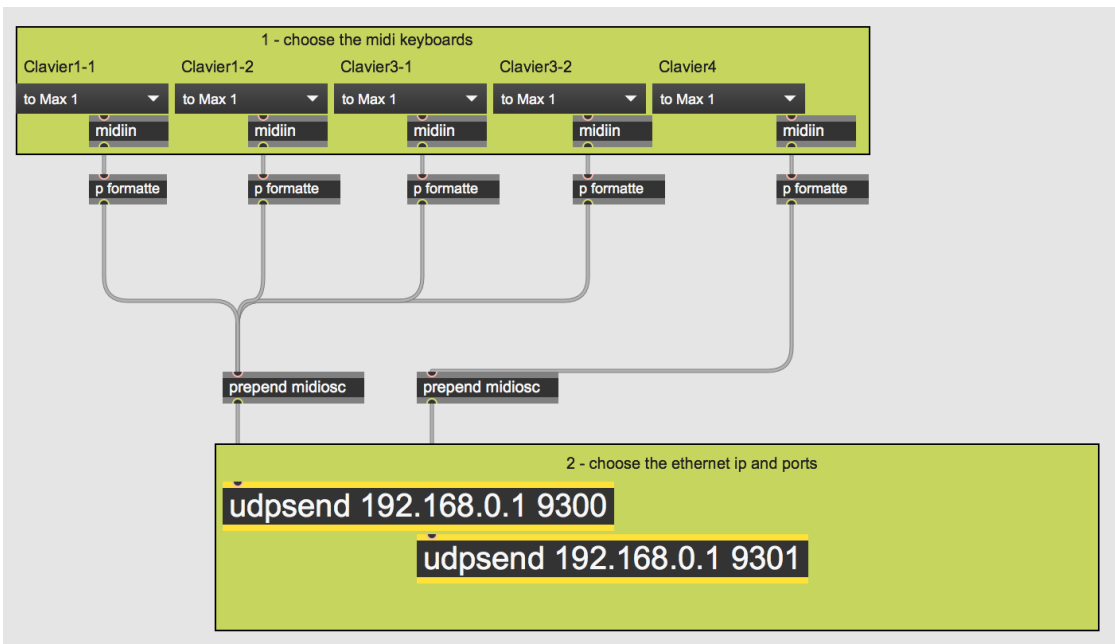
Open the patches ‘\_MAIN\_EVANOU’ in Max8.



**To Initialize:**

1. Set Buffer size and I/O Vector size to 64, sampling rate to 44100.
1. Click on 'init'.
2. Turn the DAC on
3. Check connection with the patcher on stage (you can use ping or ask the player to test).
3. Trigger the first event with space bar (event 0) before the concert starts. Check the click-track with the conductor (there is a toggle to start and stop it). During the concert, the click-track is automatically started on event 78 and stopped on event 181 (triggered by 'clavier4').

**Computer on stage:**



Copy the file 'evanoui-mergermidi' on your hard disk.

Launch the file in Max8.

To initialize the patch:

1. choose the midi input for each of the keyboards (clavier1-1 stands for the viola piz samples, clavier1-2 stands for the harp samples and so on...).


**Mixing instructions:**

You can map a BCF2000 or Mira to the live mixing faders.

The levels of the keyboards should always be balanced with the acoustic instruments, in order to mix equally the timbres.

The level of the soundfiles should also be balanced. The soundfiles with a 'marimba' sound should be loud, and the soundfiles sent to the

‘coulisse-loudspeakers’ (bar 84, 106, 123 and 166) should appear as distant from the stage.

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## Program note

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L'écriture de cette partition est basée sur une polyphonie-timbre. Cette polyphonie-timbre est obtenue par des superpositions de *tempi* faisant évoluer des processus harmoniques et des agrégats complexes. Ces processus évoluent en appoggiatures qui laissent percevoir le déroulement d'échelles évolutives. Ces échelles s'altèrent et se démultiplient en phénomènes octavians et brisés. (Voir l'ouverture des *Nègres*, mon *deuxième quatuor*, *Incurver*, *Se briser*). L'orchestre symphonique tente dans cette pièce une mutation conséquente à l'évolution des langues musicales. L'identité originare de ce que nous appelons « l'orchestre symphonique » résulte du système tonal et de la fin de l'époque baroque européenne. Dans cette pièce, l'apparition d'un groupe instrumental spécifique basé sur différentes familles de « cordes pincées », le pianoforte, la superposition de plusieurs diapasons, les interférences entre les sons propagés dans l'espace par l'acoustique « aérienne » des instruments (le piano notamment) et les sons instrumentaux échantillonnés, provoquent des mouvements résultants et des battements très mobiles.

Michaël Lévinas

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