

Georges Aperghis  
*Avis de Tempête*

2004

Max8-2024  
2024



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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

- Nov. 17, 2004, France, Lille, Opéra

Publisher : partition téléchargeable sur le site du compositeur

### Detailed staff

- soloists: solo soprano, 2 solo baritones, female dancer (also actress)
- oboe, horn, trumpet, trombone, electric guitar, 2 other keyboards [claviers non spécifiés] , viola, cello

### Realisation

- Sébastien Roux

### Useful links on Brahms

- [Avis de Tempête](#) opera, for ensemble, three singers, one actress and electronics (2004), 1h10mn
- [Georges Aperghis](#)

## Version related information

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### Documentalist

Serge Lemouton (Serge.Lemouton@ircam.fr)

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

### Realisation

- Sebastien Roux (Computer Music Designer)
- Emilie Morin (Assistant)

Default work length: 1 h 10 mn

### Upgrade Motivation

This version integrates the MIDI samples in Max (instead of using EMU E4X hardware samplers).  
The vbap external object has been replaced by spat5.vbap~

### Comment

updated to run on ARM computers

### Other version(s)

- [Georges Aperghis - Avis de Tempête - Mainz 2018 \(Oct. 22, 2018\)](#)
- [Georges Aperghis - Avis de Tempête - portage-giron \(March 9, 2011\)](#)
- [Georges Aperghis - Avis de Tempête - maxmsp5-version-unttested \(Oct. 12, 2010\)](#)
- [Georges Aperghis - Avis de Tempête - transfert\\_mustica\\_ftp \(April 14, 2010\)](#)
- [Georges Aperghis - Avis de Tempête - Creation \(Nov. 17, 2004\)](#)

## Electronic equipment list

### Computer Music Equipment

- 3 MacBook Pro - *Apple Laptops* (Apple)  
main + spare + conductor (= this 3rd computer is optional? see text)
- 3 Max 8 - *Max* (Cycling74)
- 1 sampler~ - *External objects* (Cycling74)  
Max Package
- 1 Ircam Spat - *Library* (Ircam)  
version 5
- 2 Fireface 802 - *Sound Board* (RME)  
or equivalent
- 2 MIDI Keyboard - *MIDI Keyboard*  
88 keys + volume pedal + sustain pedal
- 1 BCF 2000 - *MIDI Mixer* (Behringer)  
optional?
- 1 Footswitch / Sustain Pedal - *Footswitch / Sustain Pedal*  
used by the clarinet player as a trigger to start electronic sequences
- 2 Footswitch / Sustain Pedal - *Footswitch / Sustain Pedal*  
with keyboards
- 2 Volume Pedal - *Volume Pedal*  
with keyboards
- 1 MIDI interface - *MIDI Interfaces*
- 1 MIDI booster - *Booster*

### Audio Equipment

- 8 Dynamic microphone - *Dynamic Microphones*  
for instruments
- 4 HF System - *HF System*  
for singers
- 8 Loudspeaker - *Loudspeakers*  
+ 1 subwoofer
- 1 Digital Mixing Desk - *Digital Mixers*

**Files**

<b>File</b>	<b>Type</b>	<b>Author(s)</b>	<b>Comment</b>
<a href="#">AvisDeTempete-2024</a>	Patch	Serge Lemouton	for MAX 8 ARM
<a href="#">Samplor Package</a>	Software	Serge Lemouton	To be installed into Max8 packages

## Instructions

### Audio setup

INs (Mixing Desk)

- Mac 1 (main) → RME 1 → Mixing Desk
- Mac 2 (spare) → RME 2 → Mixing Desk
- Microphones → Mixing Desk

OUTs (Mixing Desk)

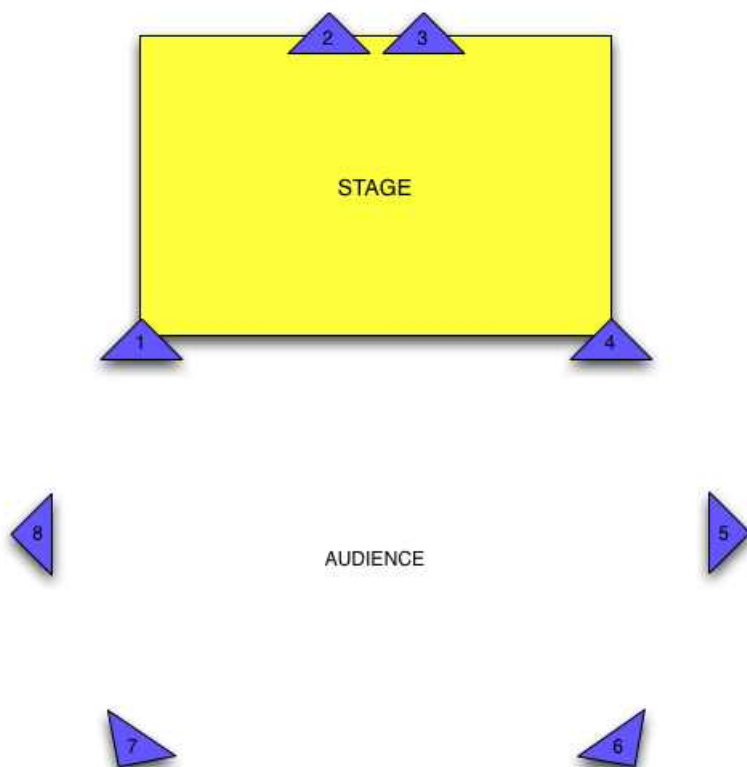
- Mixing Desk → 8 loudspeakers + subwoofer

### Midi setup

- Pedals → Keyboard 1+2 → MIDI Merger → MIDI Booster → MIDI Interface 1+2 → Mac 1+2
- Mac 1+2 (ethernet) → Mac 3 (conductor)

### Loudspeaker setup

The loudspeaker setup used at the Lille Opera House (in 2004) is shown in the following figure.



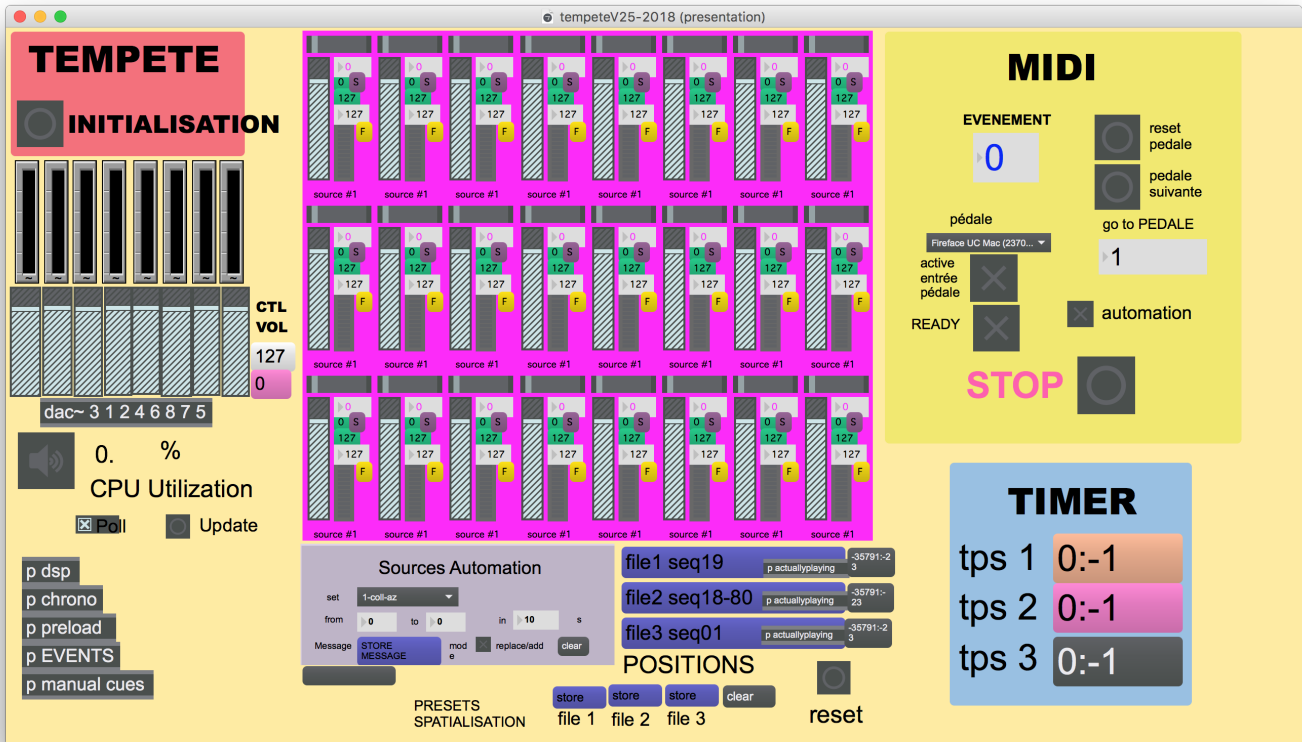
2. Launch Max version 8.

3. Click on Options/File preferences. Then add the folder "ADP2024".
4. Sampling rate = 44100 Hz, I/O Vector Size = 512, Signal Vector Size = 512.
5. Quit Max.
6. Launch the main patch called "tempeteV25-2024.maxpat". It corresponds to the main patch with the spatialized electronic sequences.
7. Launch the sampler patch called "AvisDeTempeteSamplers-v3.maxpat". It corresponds to the emulated samplers for the 2 MIDI keyboards.

## Patches presentation

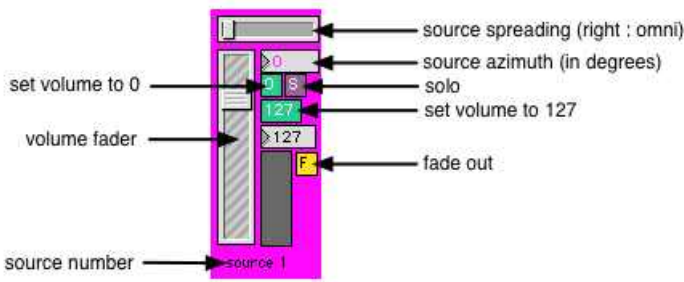
### Main patch

The main patch is composed of 2 main parts: the MIDI part (in yellow, see the following figure) and the Spatialization part (in pink and grey).



The MIDI part receives MIDI information from the clarinetist pedal located on the stage. That allows the user to initialize the patch and to start a sequence if the performer has missed a cue or if the MIDI connexion is not working. It contains a patcher called georgeseslie which was used during the rehearsals (in 2004).

The concert patch uses 3 players of 8 channel files. One channel of a player calls a source. Each source is spatialized thanks to a simple interface in the Spatialization part. For each sequence, a scene is stored in the patch. When the MIDI pedal is pressed, the scene is recalled and the 8 channels sequence are played.



[Fig4\_Fader]

### Sampler patch

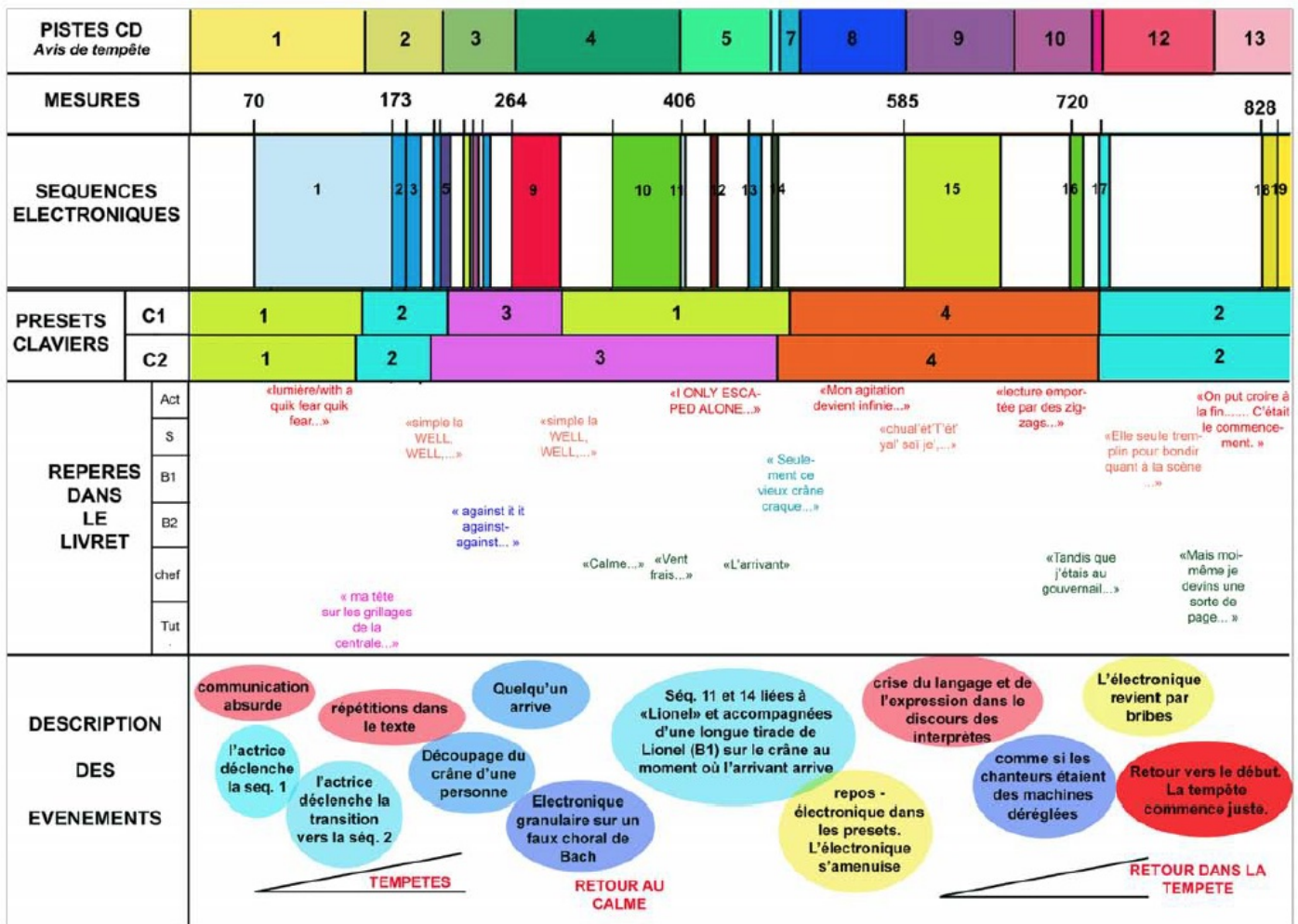
The sampler patch has been designed to replace hardware samplers (in 2011) (see the following figure).





[Fig5\_SamplerPatch]

The sounds are automatically loaded in the patch. Thus, it should work immediately with the MIDI keyboards. During the piece, the keyboards have to choose the MIDI channel corresponding to the MIDI preset: 1, 2, 3, or 4. Each channel corresponds to a soundbank played by the keyboard, and are not always the same between the 2 keyboards (see the following figure). In the score, bar 743/744, it is noted that the keyboards should change to preset 2', it corresponds to preset 3.



## REPERES DANS LA STRUCTURE DE LA PIECE

[Fig6\_Structure]

The outputs were set to the DACs 9-10 for the 1st keyboard and 11-12 for the 2nd keyboard, to be managed separately in the mixing desk by the sound engineer (as in the original version with MIDI hardware samplers).

## Counter patch

A “counter” patch was apparently programmed initially to give a clock to the conductor. This Max patch was described in the original documentation but was not found in the original folder with the other patches. Actually, it seems not necessary: the events are triggered by the clarinetist, and it seems that there is no need of a precise synchronization with electronics strictly speaking. However, if needed, it could be programmed and synchronized with the events thanks to the “chrono” subpatch in the main patch, where the IP address of the conductor computer can be modified to communicate via OSC.

## Initialization routine

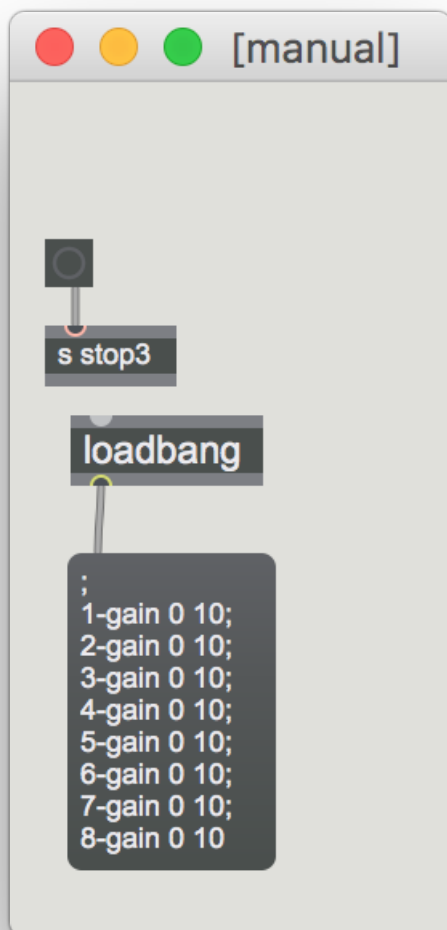
To initialize the patches:

1. In the main patch, turn the “READY” toggle on (in the MIDI yellow part).
2. Turn dsp on.

## Score following

All the sequences are started by the clarinetist.

At the end of 17th sequence, the musical assistant has to stop this sequence when the keyboards start to play (cf. the following figure).



[Fig7\_ManualCue]

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