

Michael Jarrell  
*Rhizomes*  
1993  
Rhizomes\_2013  
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

- May 17, 1993, Paris, Centre Georges-Pompidou

Publisher : Lemoine

### Detailed staff

- 2 pianos, 2 percussionists

### Realisation

- Thomas Hummel
- Zack Settel

### Useful links on Brahms

- [Rhizomes Assonance VIIb](#), for two pianos, two percussionists and electroacoustic device (1993), 15mn
- [Michael Jarrell](#)

## Version related information

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Performance date: Oct. 12, 2013

Documentation date: Dec. 4, 2013

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

### Documentalist

Augustin Muller (Augustin.Muller@ircam.fr)

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

### Realisation

- Augustin Muller (Computer Music Designer)

Version length: 15 mn

Default work length: 15 mn

### Upgrade Motivation

No Midi Piano needed.

Audio following for piano 1.

New transport, new follower.

Max 6.1.x version, fixed harmonizers.

### Comment

played in concert at the Venezia Biennale festival with Makrokosmos quartet

### Other version(s)

- [Michael Jarrell - Rhizomes - portage 2020 \(April 9, 2020\)](#)
- [Michael Jarrell - Rhizomes - transfert\\_mustica\\_ftp \(April 14, 2010\)](#)
- [Michael Jarrell - Rhizomes - Macintel version \(Nov. 5, 2009\)](#)
- [Michael Jarrell - Rhizomes - Macintosh version \(June 3, 2004\)](#)
- [Michael Jarrell - Rhizomes - Premiere \(May 17, 1993\)](#)

## Electronic equipment list

### Computer Music Equipment

- 1 MacBook Pro - *Apple Laptops* (Apple)
- 1 Max 6 - *Max* (Cycling74)  
version 6.1 or above
- 1 antescofo~ - *External objects* (Ircam)
- 1 Fireface 400 - *Sound Board* (RME)
- 6 Footswitch / Sustain Pedal - *Footswitch / Sustain Pedal*  
percussions may need more than a single pedal ...

### Audio Equipment

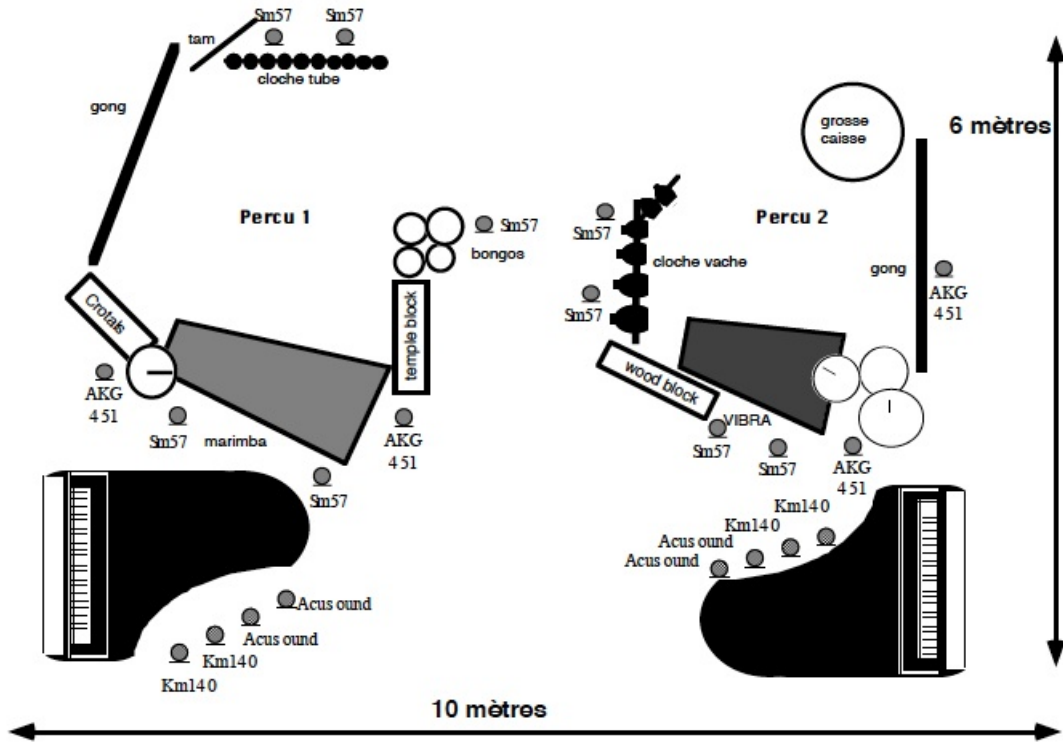
- 4 Loudspeaker - *Loudspeakers*
- 1 Mixing Console - *Mixing Console*
- 1 Reverberation Processor - *Reverberation*

**Files**

<b>File</b>	<b>Type</b>	<b>Author(s)</b>	<b>Comment</b>
<a href="#">Rhizomes-2013_venise.zip</a>	Patch	Augustin Muller	Patch, score & dependencies
<a href="#">Rhizomes_simulations.zip</a>	Simulation files		

# Instructions

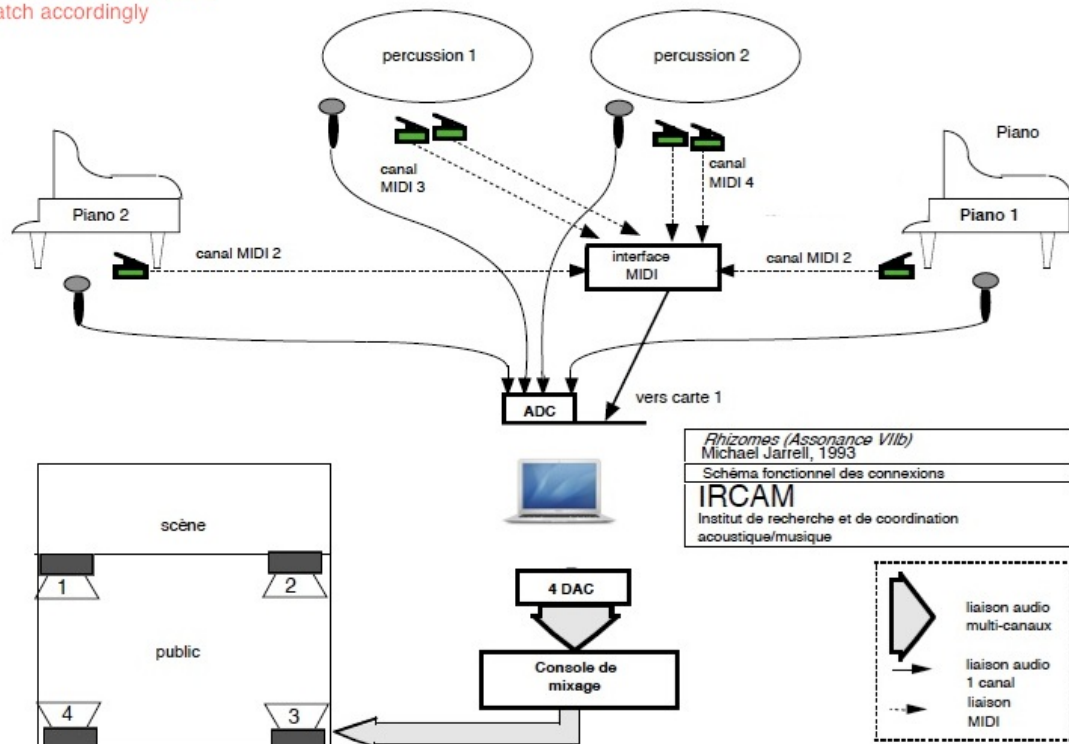
## microphones and stage setup



## Loudspeakers and Midi setup

## Schéma des connexions de *Rhizomes*

nota : in this version (2013), all pedals were merged on 1 midi channel. If for practical reasons pedals are separated (like on this plan), modify the midi io subpatch accordingly



### Software installation

Please use Max 6.1 or higher

Place the whole Rhizomes-2013\_venise folder in your Max file preferences

DSP Status:

- Fs : 44.1kHz
- IO : 256
- VS : 128
- Overdrive : On.
- Audio Interrupt : Off

### System calibration and tests

You can use the simulations subfolder provided.

piano1\_suivi-rec provides samples for testing the follower in specified sections.

Two simulations are provided : an Ableton Live project made at ircam in 2013 with the Makrokosmos quartet, and an older one (undated)

### Audio Inputs

- ADC 1 = Piano1 submix, goes to follower é FX
- ADC 2 = Piano2 submix goes to FX
- ADC 3 = Percussion 1 submix goes to FX
- ADC 4 = Percussion 2 submix goes to FX

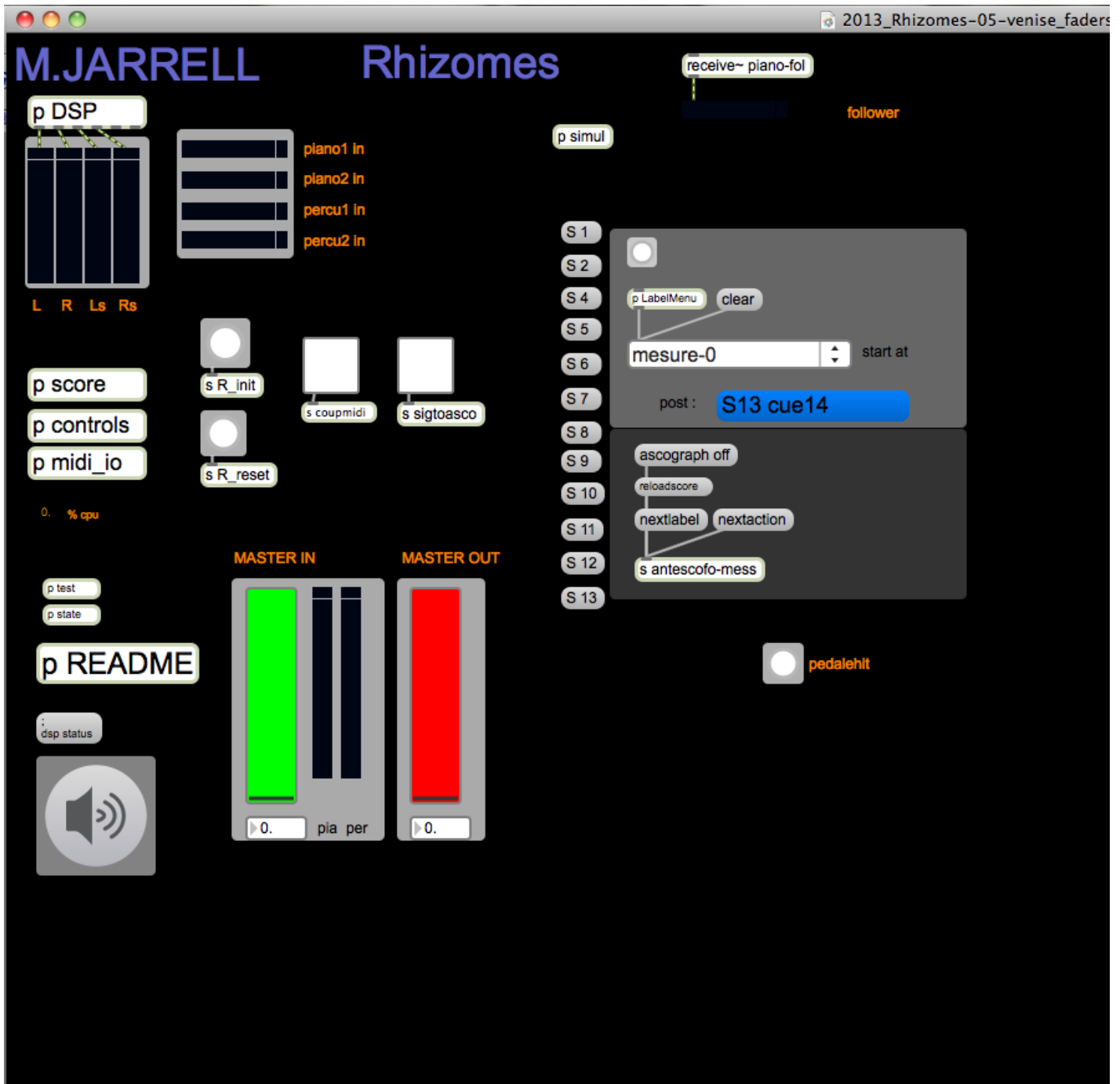
### Initialization routine

- Check that the score has been correctly loaded in the max window when the patch is loaded.



- Check audio connections (audio on !)
- Check midi connections (only one channel for all pedal switches).
- Check the level of incoming piano 1 signal in antescofo (you can use subpatch score, subpatch Calibration).
- Init
- Reset
- Choose start bar in menu.

## Patch presentation



This patch is extremely close to the previous version in terms of DSP : only the harmonizers have been modified to fix some problems with Max 6.1.

On another hand the score and following systems have been completely rewritten. The former midi detonate-based follower has been replaced by antescofo as sequencer and audio follower : there is no need for a midi piano for piano 1. The complex system of pedals has been simplified.

We need one pedal per player which can be merged. They act as a "nextlabel" for the follower (= right arrowkey). The audio following on piano 1 is automatically triggered on and off within the score. Spacebar can be used to trig it on and off manually.

Qlists have been hence replaced by a single asco score. The structure in sections is still accessible, (nota. there is no section 3), with now a reference to actual bars.

in the score Note 120 marks a pedal event. Some previously audio followed events may have been replaced by pedal hits in rehearsals depending on the quality of the following.

Faders may be midi controlled.


We used a fader for the samples level, another for the RT effects level, and 2 masters (in/out). samps and effects ctl fader are located in the control subpatch.

Look in subpatch midi io and make your own as this version use mackiecontrol midi format.

## Performance notes

The Mac outputs will be sent to a professional quality reverberation. TR around 3secs according to the performance hall.

All speakers will be fed with reverberation (4 channel reverb welcome !).

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## Program note

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« *Rhizome*, écrit Michael Jarrell, est un terme de botanique. C'est l'appellation d'une tige souterraine qui s'allonge en poussant soit des rameaux, soit des feuilles à l'une de ses extrémités, tandis qu'elle se détruit par l'autre. Comme l'étymologie l'indique, il s'agit d'une racine. »

*Trei II* pour soprano et cinq instruments (1982-1983) et *Assonance VII* pour un percussionniste (1992) peuvent être considérées comme les deux « racines souterraines » de *Rhizomes*. Ces deux œuvres explorent certaines possibilités de la superposition de périodes ou de *tempi* différents — possibilités que *Rhizomes* intègre à des « cycles de développements » continus : la simple répétition d'une note peut donner naissance à des figurations rapides, à des trémolos, à des trilles, à un son tenu, selon les embranchements que le compositeur emprunte, selon les « chemins » qu'il suit au sein des arborescences qui constituent une manière de « grammaire générative » pour la pièce.

Cette continuité mouvante se retrouve dans le travail du timbre : ainsi, la préparation de l'un des deux pianos pourra créer un « pont » vers la sonorité du *wood-block*. Et de fait tout le projet de *Rhizomes* pourrait être considéré comme un nouveau regard porté sur cette interrogation qui était au cœur de *Trei II* : comment intégrer la percussion, cet « élément perturbateur », au sein de l'univers tempéré ?

Peter Szendy.

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