

Yan Maresz  
*Sul Segno*  
2004

2017\_CGP\_Holliger-Spat5  
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

- June 6, 2004, Paris, Centre Georges Pompidou, festival Agora de l'Ircam

Publisher : Durand

### Detailed staff

- harp, guitar, cymbalom, double bass

### Realisation

- Denis Lorrain
- Manuel Poletti

### Useful links on Brahms

- [Sul Segno](#) for harp, guitar, cymbalum, double bass and electronics (2004), 20mn
- [Yan Maresz](#)

## Version related information

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Documentation date: April 18, 2024

Version state: valid, validation date : May 20, 2024, update : May 20, 2024, 2 p.m.

### Documentalist

yann brecy (yann.brecy@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)
- Bagnoli Luca (Sound engineer)

Version length: 20 mn

Default work length: 20 mn

### Upgrade Motivation

Max 8 Support.

Spat5 upgrade

### Comment

Small upgrade of spat reverb, from spat4 to 5

### Other version(s)

- [Yan Maresz - Sul Segno - 2017\\_CGP\\_Holliger \(July 3, 2017\)](#)
- [Yan Maresz - Sul Segno - 2013-Japon \(Oct. 10, 2013\)](#)
- [Yan Maresz - Sul Segno - max5 \(Oct. 28, 2010\)](#)
- [Yan Maresz - Sul Segno - transfert\\_mustica\\_ftp \(April 14, 2010\)](#)
- [Yan Maresz - Sul Segno - Sul Segno 2007 \(March 21, 2007\)](#)

## Electronic equipment list

### Computer Music Equipment

- 1 Digital Performer - *Music Software* (MOTU)
- 1 Max/MSP - *Max* (Cycling74)  
max 8
- 1 Ircam Spat - *Library* (Ircam)  
Spat 5 library
- 2 BCF 2000 - *MIDI Mixer* (Behringer)

### Audio Equipment

- 4 ear-monitor - *Headphones*

**Files**

| <b>File</b>                   | <b>Type</b>     | <b>Author(s)</b> | <b>Comment</b>           |
|-------------------------------|-----------------|------------------|--------------------------|
| <a href="#">Rider</a>         | Technical rider |                  |                          |
| <a href="#">SulSegno_2017</a> | All-in-one      |                  | All patch sounds & simul |

## Instructions

### Patch informations:

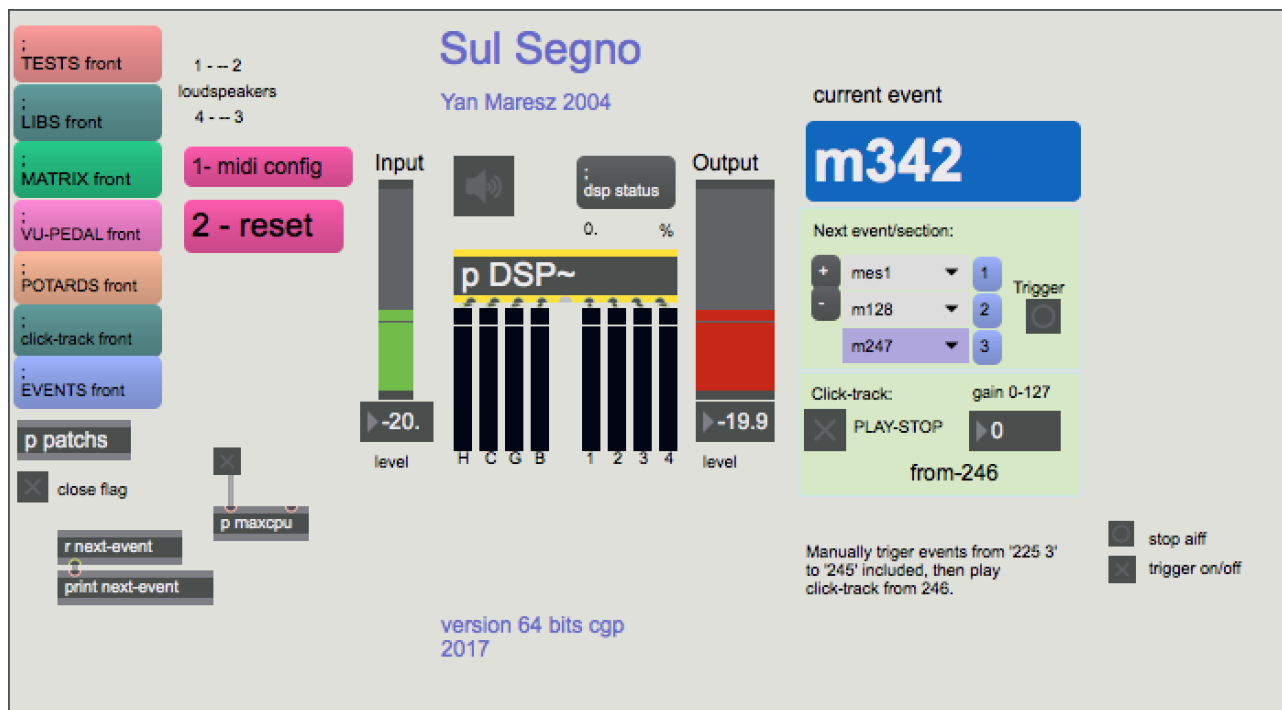
#### Installation:

Download and install the *Spat 5* library : <https://forum.ircam.fr/projects/detail/spat/>  
Copy the folder 'SulSegno-2017\_64' on your hard disk.

Launch max/msp 8, and select the folder "SulSegno-2017\_64" in the 'file preferences' menu of max/msp.

Open the file 'SulSegno-2017\_64' in max-msp 8 in rosetta mode.

#### Description:



The concert patch is composed of:

- Left : configuration interface and display patchers
- Middle: dsp and master level faders
- Right: events display and click-track interface

#### Initialisation:

##### Configuration of the audio interface:

The electronic has 6 inputs: dac~ 1 2 3 4 5 6:

Input 1-2 : Harp Stereo (you can adjust mono downmix)

Input 3-4 : Cymbalum stereo (you can adjust downmix)

Input 5 : Guitar

Input 6 : Bass

and 5 outputs:

dac~ 1 2 3 4 for loudspeaker 1 to 4 clockwise and a fifth output from quicktime for the clicktrack

In the configuration of the audio interface outputs, quicktime should be sent as a fifth output. Select also the audio interface as default output sound device of the computer (in the audio preference) so that quicktime is directed towards the audio interface.

Configuration was : FS 48kHz, IO size 256, Vector Size 64, Overdrive OFF

**MIDI Config :**

have a look at the midi config subpatch

Faders : 2 linked BCF were used for CGP performance, with controls from 1 to 16 on channel 1.

1 to 14 match the master faders present in "POTARDS" subpatch. 15 & 16 are for global Inputs & Master out levels.

Spare : events number were send to the spare computer by midi, with 1 controler by section.

Click : the click was used just for some simulations and rehearsals. the patch receives incoming midi by live or dp on the port of your choice (here "to max 1")

note 108 trigs events (by doing a next message), other pitches are for click sounds that could be played by the AU DLS Synth.

**Configuration of the click-track:**

Each of the instrumentists has a click-track in order to be synchronised with the electronic.

The click-track should be played from Digital performer (file 'Sul Segno Click Court-Circuit'). In this case, you should send it to the max patch (see initialisation of the patch step 1) so that you can control the level directly from max.

We provide here a Live Session as well for Live users. Be careful , as the session starts with an extra bar of click, all bar numbers have an offset of +1.

For the 2017 version, no click track was used and all cues were triggered from the FOH by the computer music designer as a request from the conductor.

Right arrow on the keyboard trigs next event. Up and down arrows scroll events with no trig. In this case it is strongly advised to use video feedback of the conductor.

**To initialize the patch:**

1. Select the midi external mixer device and the external event trigering / click-track device (midi routing for click-track from DP)
2. click on reset
3. turn the dac on
4. rewind the click-track in Digital performer / Live

You are ready to play the piece.

**Execution instructions (clicktrack version)**

In order to use the internal click-track, the toggle 'play-stop' turns the click-track on-off

If you use Digital Performer as external click-track, just configure the midi external trigerring device, and select the event following the bar from which you will start the external click-track.

During the execution of the piece:

To begin the piece, start manually the click-track at the first beat of the the conductor.

Just after bar 225 beat 1, stop the click-track, and position the cursor in dp to bar 246. There is a harp solo, and you must trigger the events manually (better directly in max with 'space bar') until event 245. After you have triggered event 245, its up to you to decide when to start again the click-track. After you start it, the conductor receives three beats before bar 247.

**Mixing**

Sul Segno makes a great use of RT treatments along with relatively short soundfiles and longer "tapes". Instruments should be clearly amplified and the electronics and amplification should sound at the same level. If all the instruments are used for RT, Harp is the main processed instrument. Harp input should be slightly louder than the others, and a short rehearsal with harp only would be useful, especially for the 2 solo parts. Electronics and amplification should blend in.

Some strong levels levels of electronics usefull for setup would be found at bar 97 and following (1st tape part), at the climax of Harp 2nd cadenza between bar 233-235 and at bar 342 (end).

All the treatments On- Off and volume curves are automated. Nevertheless, the Computer Music Performer should mix the master layer of these elements.

The mixing of the effects can be done with a 16 faders mixer. Some treatments need particular attention: FFT filters, harmonizers, resonators, sfiles and granulators.



Have a look at the matrix patch during rehearsals to visualize the treatment chain, use the patcher "POTARDS" to access the mixing page.

### **Electronics elements Overview :**

spatialization : instruments will be spatialized by the patch. see for example bar 287.

del: delays ; reinjection of material. lots of moment in the piece. should be as equal as the amplified sound (ex on bar 3). used in conjunction of other treatments (ex from bar 248 with mod)

harm : 4 harmonizers. use of delays inside the harm too. good examples on dbass at bar 134 & following, or in the 2nd harp cadenza at bar 225 & fol.

mod : ring modulation ; example at bar 248

shift : frequency shifting : example on harp at bar 39 (with dels); result should be as loud as the real harp;

munger ; various granular textures& patterns ; look at end of tape 1 section beginning at bar 106, and especially at 248 & following (guitar capture and rhythmic patterns)

reson : resonators (cnmat) ; various models and configurations are used, especially on harp lots of use in the piece, especially 2nd Harp Cadenza at bar 235 and following or at bar 175 and fol., 203 & fol. ... can sound loud ; beware of feedback.

Reverbs : used all along the piece on instruments or treatments outputs. RevA is for longer times. Example of use at bar 44 and following, or bar 164.


Gran; granulator ; used for various types of textures. One of the main source of electronic sounds. Granulates sound that are captured during performance. have a look at : bar 106 and following, gran and mung should make the texture of bar 120 and fol. And especially have a look from bar 128 (capture) until the end of 1st Harp cadenza at 167. Gran should be at the same level as the harp at bar 152, then make all the accompaniment texture during the cadenza. To be constantly adjusted for the mix.

Samp : sampler(or~) trigs rather small sound files, especially the bass sounds ; example at bar 245 or from bar 313. should be well present !

Sfiles : Main soundfiles, multichannel. All the harp sequences (look at bar 14), textures, and TAPES : bar 97, bar 327 and fol. bar 342 at the end. Not too loud for the rather short ones, but bar 97 should be well present. Do not cover the instruments at the end (327). End sound file (from 342) should be a little bit faded out at the end of the file.

Filters : 2 FFT filters. Used at various places in the piece, be carefull of feedback. Have a look at bar 14 on the dbass (should be a little coloration of the sound) and at the 2nd Harp cadenza at bar 225 where the FFT filters should pushed louder.

Dist : not used

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## Program note

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*Sul Segno*, pour harpe, guitare, cymbalum, contrebasse et dispositif électronique est la réélaboration pour le concert de matériaux provenant de la pièce *Al Segno*, composée en 2000 à l'Ircam pour un spectacle chorégraphique de François Raffinot. Entièrement réécrite, cette partition explore le domaine sonore des instruments résonants à cordes pincées. La matière musicale de la pièce évolue en un flux et reflux de figures mouvantes qui se résolvent dans des solos et duos aux caractères introspectifs ou dans des structures rythmiques m'affranchissant progressivement de la délicatesse du timbre des instruments afin de créer une expression musicale énergique, délibérément en contradiction avec l'image visuelle du petit ensemble. Le champ acoustique des instruments résonants est étendu au niveau de l'électronique par le principe de synthèse par modèle de résonance. La matière première de ces modèles est une banque d'analyses des sons instrumentaux, qui sert de base à la synthèse. Les transitoires d'attaque de ces sons ont ensuite été séparés de leur corps harmonique, pour obtenir toute une série d'impulsions bruitées, appelées à venir servir d'excitateur à ces corps harmoniques modélisés. Au niveau de l'écriture instrumentale, l'entretien du son par l'utilisation de différents modes de jeu, crée un univers granulaire, caractéristique de la couleur générale de la pièce, mais aussi, empreinte formelle identifiable. D'un point de vue plus global, le paradigme de l'action sur la corde faisant résonner le corps de l'instrument est appliqué à toute l'électronique, monde de résonances par extension de l'instrument dans *Sul Segno*. Ainsi, ce principe régit aussi les longues périodes musicales échantillonnées à la volée et traitées de manière continue dans la pièce, créant nombre de traces et d'ombres fuyantes et constituant l'univers complémentaire des instruments transformés, ou parfois, déformés. Je tiens à remercier les assistants musicaux qui ont travaillé sur ce projet avec moi : Denis Lorrain pour les premières phases de travail, et enfin Manuel Poletti pour son aide et son écoute, ainsi que pour tous les superbes outils informatiques qu'il a développé pour cette pièce.

Yan Maresz.

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