



SUSPENDED

Architectural Constellations

Abstract

It's been almost one hundred years since people used to look at the sky. It's been just one hundred years, but we don't longer know if the moon grows or decreases, and we can't distinguish between Venus or the Polar star, and if by any chance, or by curiosity, one night we raise our sight, the artificial light that we have created dazzles us. In the cities, the night sky does not exist.

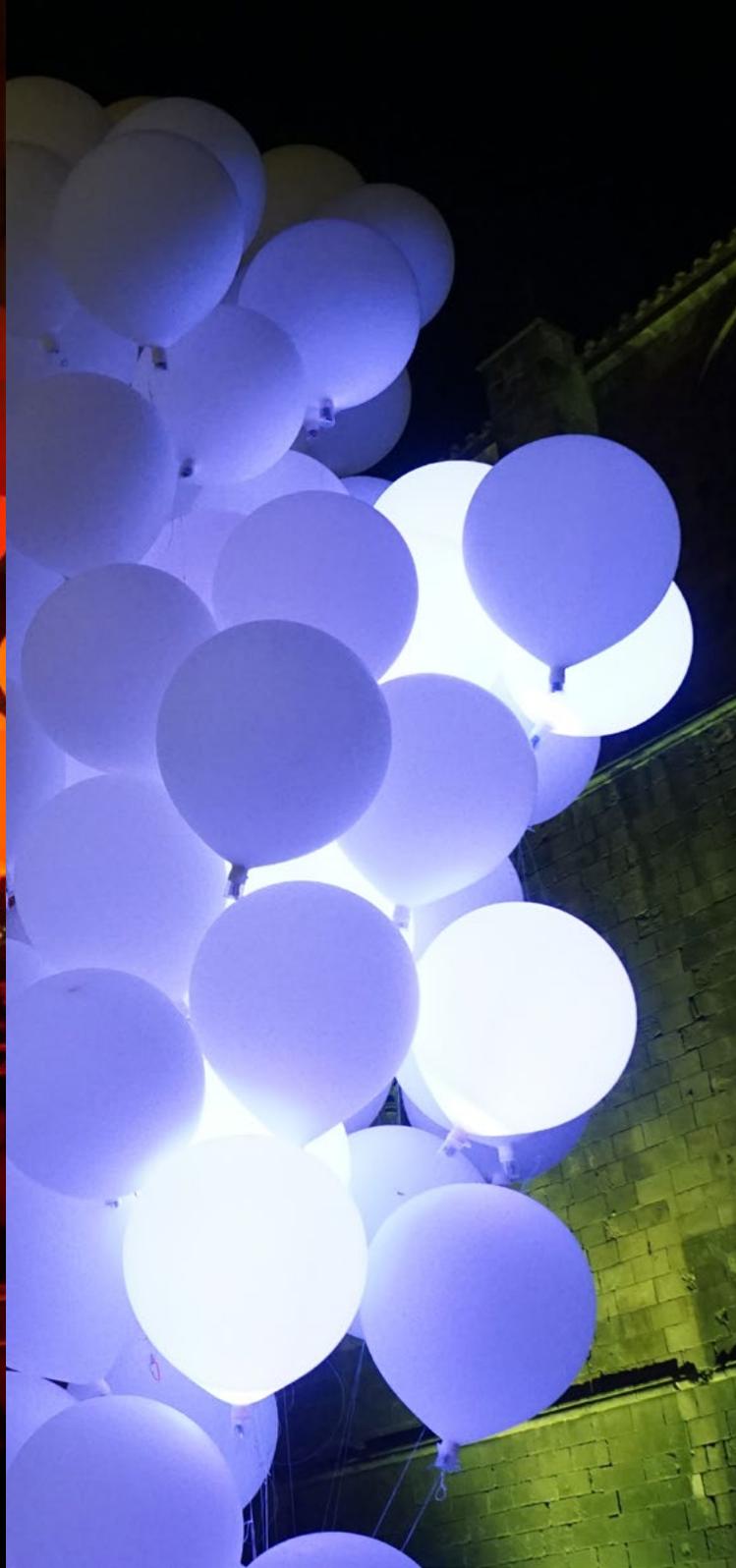
Suspended is based on the suspension to heights of 20 to 40 metres of a matrix of 100 helium balloons of 90cm diameter with an inner LED and a control system that allows to lit them individually, turning them on and off synchronically with the music, thanks to a process of "pixelmapping". Suspended simulates the apparition of stars and constellations that beat in a big aerial choreography.

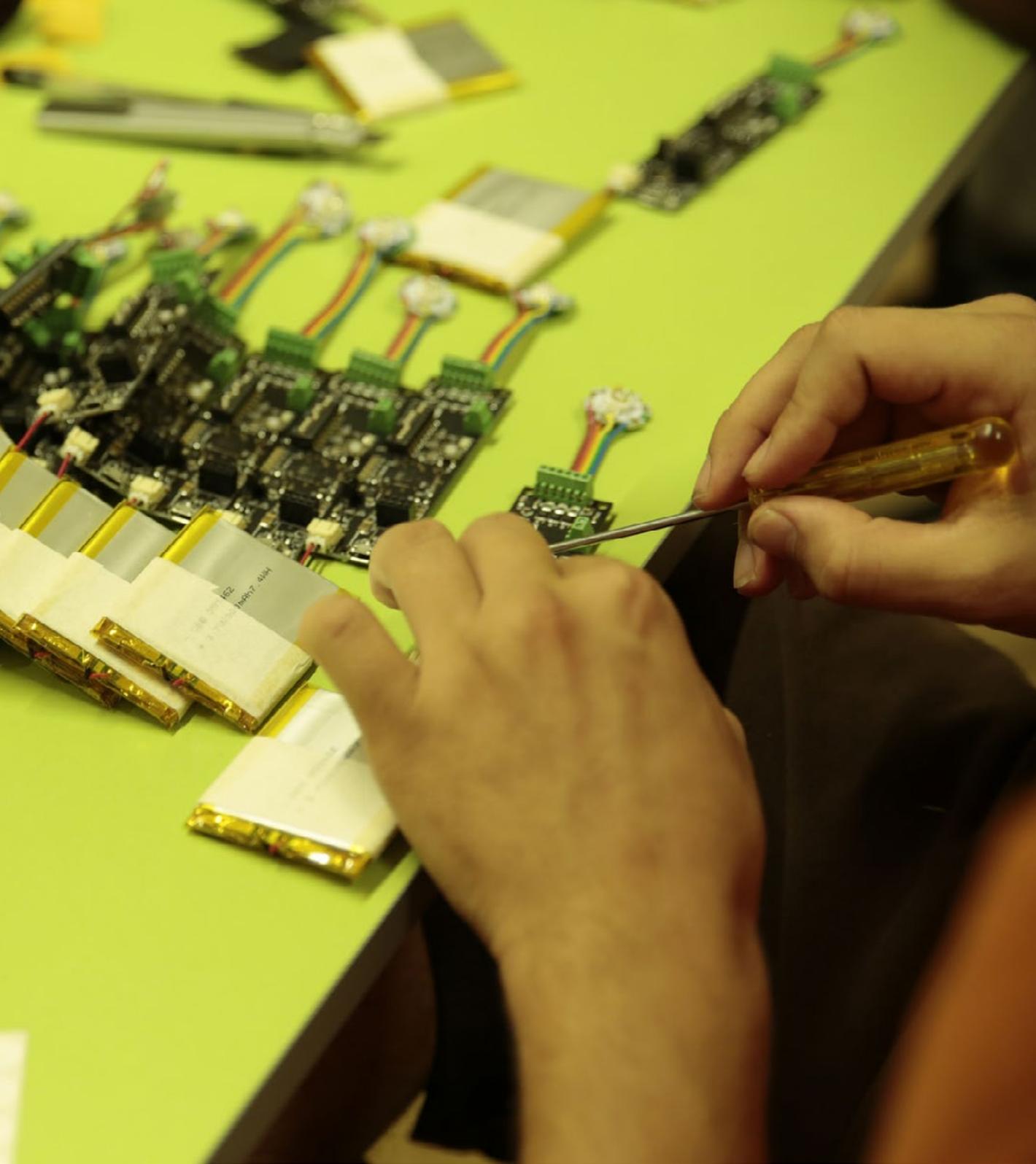
Suspended is a transforming architectural installation. Thanks to a string grid to which the balloons are knotted, the structure that holds the installation can be morphed dynamically, changing it's form during the time it's exhibited. A choreography of trained operators manipulate the string grid constantly, adding even more interest to the light installation itself, and surprising the audience with new and unexpected forms.

The installation can be held outdoors or indoors, and it includes architectural lighting for the surrounding buildings, which synchronizes seamlessly with the balloon matrix.



<https://www.youtube.com/watch?v=6ZAeBwYav5s>

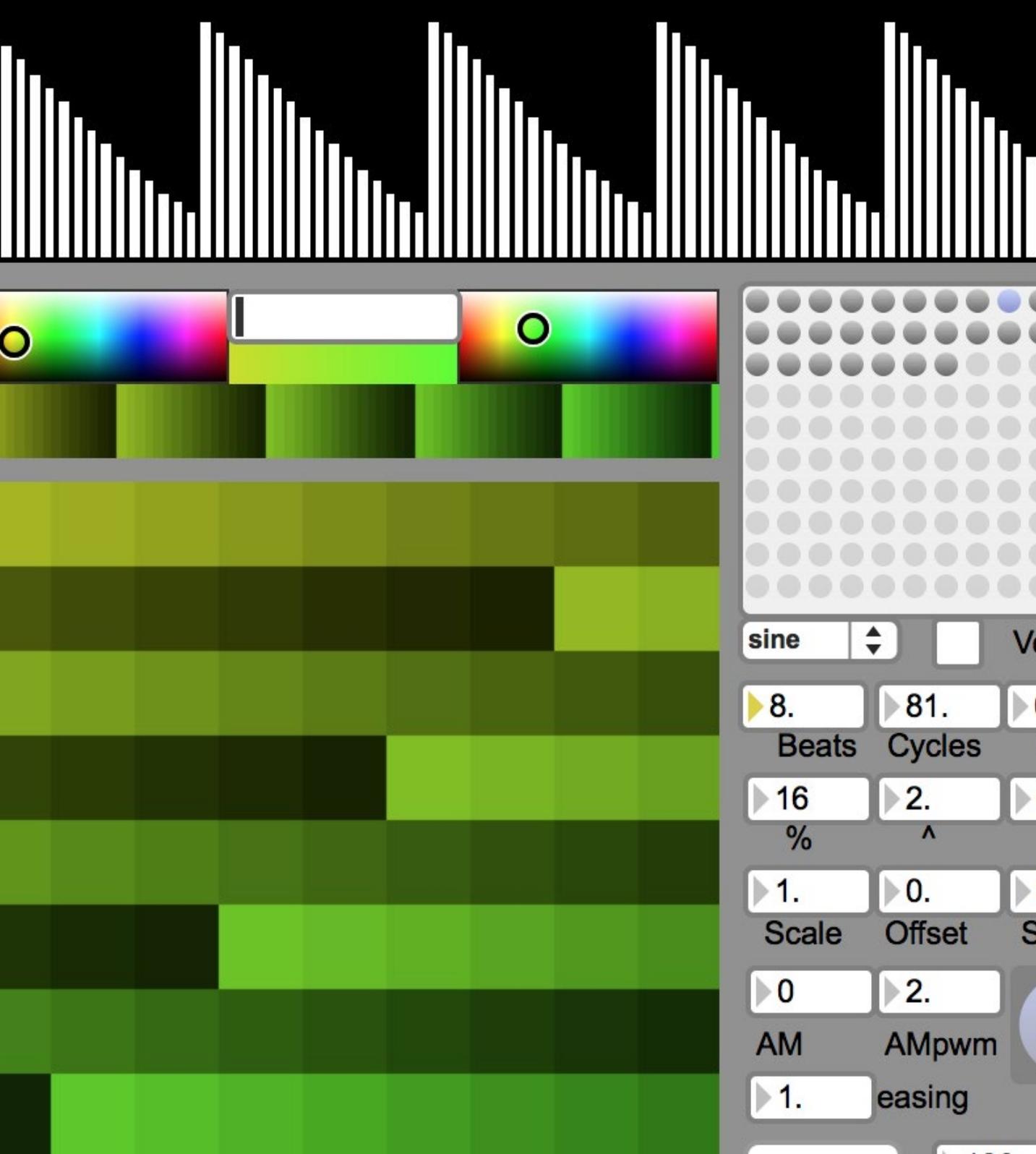




Hardware

All hardware and industrial design systems are made by our team.

We designed a hardware engine that allows us to control the RGB LEDs wirelessly. These LEDs are installed inside the helium balloons thanks to a digitally fabricated plastic container, and are powered through lithium batteries. This solution allows us to install the lights inside the balloons without using any type of cables for the control signal neither the power, thus making possible to elevate the balloons to very high heights.



Software

On the software side, all tools and communication protocols are developed by ourselves.

Thanks to a “pixel-mapping” algorithm, we can treat each balloon as an individual pixel, and by sampling pixels in a regular video file we can transform the physical balloon matrix in a low-resolution screen.

In addition to the sampling of video files, we created an algorithmic audiovisual synthesizer which can create visual patterns in realtime. This way, we can create contents on site, adapting the colors and forms to the surroundings.

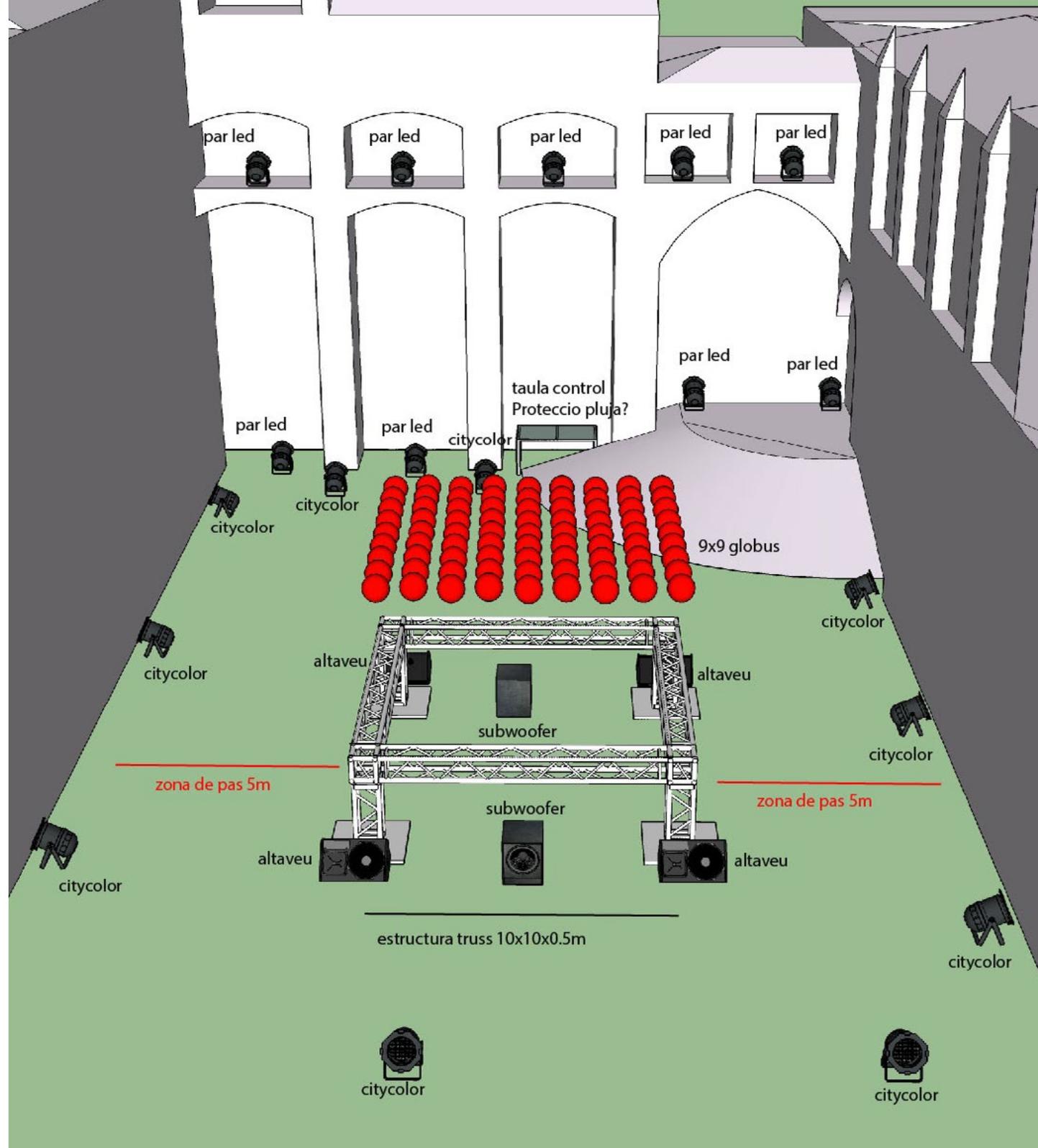
Technical Rider

Delivered by the artists:

- 81 LED Balloons (9x9 matrix)
- Strings
- Control hardware (computers, interfaces...)

Delivered by the organization:

- Helium
- 10 to 30 DMX RGB ParLED
- 4kw Sound System
- Truss structure
- Control Table



About the Authors

Suspended is developed by PlayMID in collaboration with David Sarsanedas.

PlayMID emerges from the collaboration between Playmodes (<http://playmodes.com>) and Media Interactive Design (<http://mediainteractivedesign.com>), creative studios devoted to research in media technologies and intersection between art and science. With a background on the fields of computer science, electronic engineering and dextsign, this team formed by Eloi Maduell, Álex Posada & Santi Vilanova, creates immersive installations, audiovisual research projects, and applies media technologies to theatre or advertisement. As light craftsmen and lovers of design and contemporary art in their projects we find elements of moving image, sound design, kinetic sculpture or interactivity.

David Sarsanedas has been working for several years in different fields involving music, luthierism, creative electronics and children's education.

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