



# INSPIRED

Sonic and visual installation  
Exploring the synergy of Site Light and Sound

# I N S P I R E D

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Den Haag, The Netherlands

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Site-specific installation in the room on the roof top of the KABK Den Haag, The Netherlands

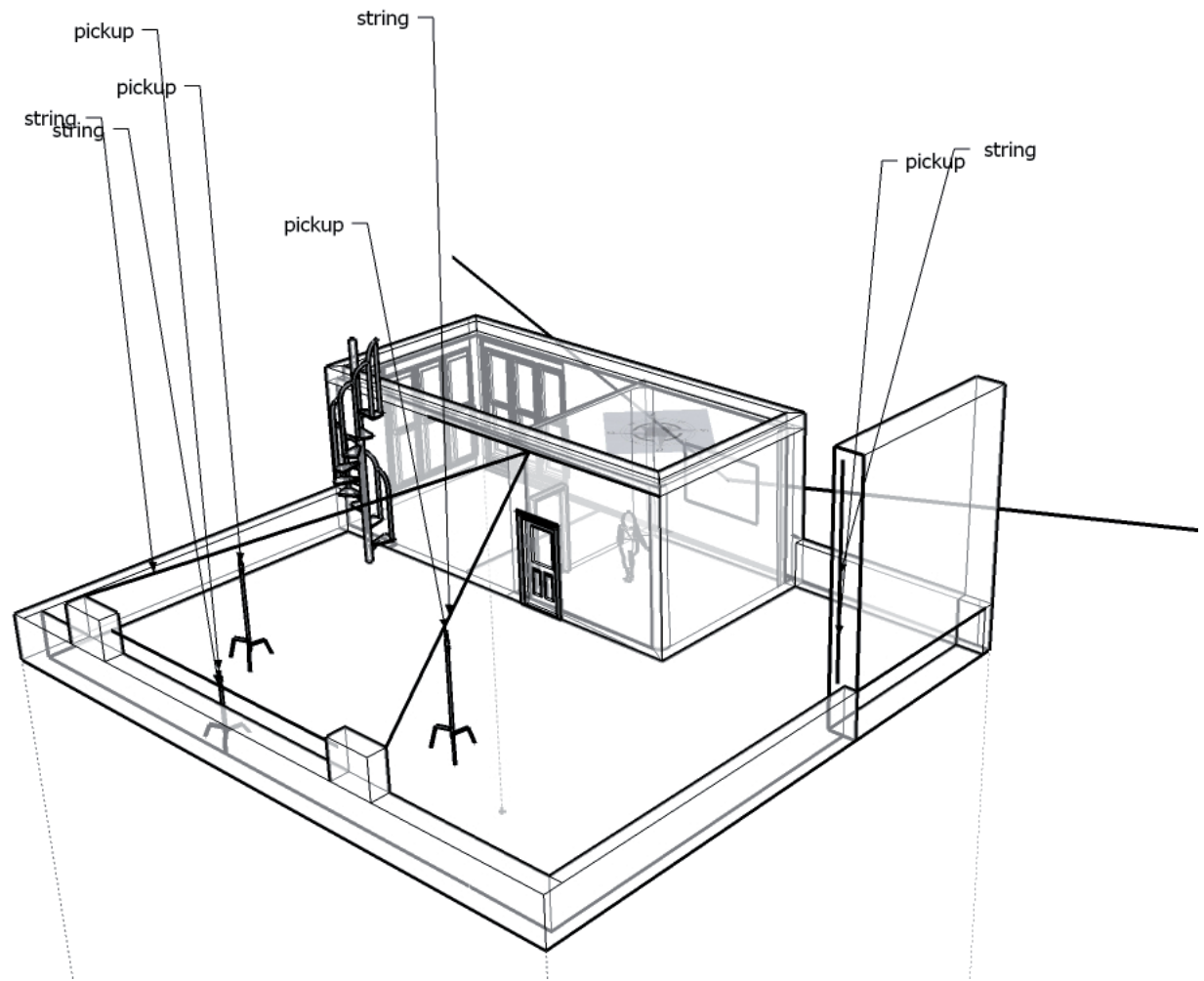
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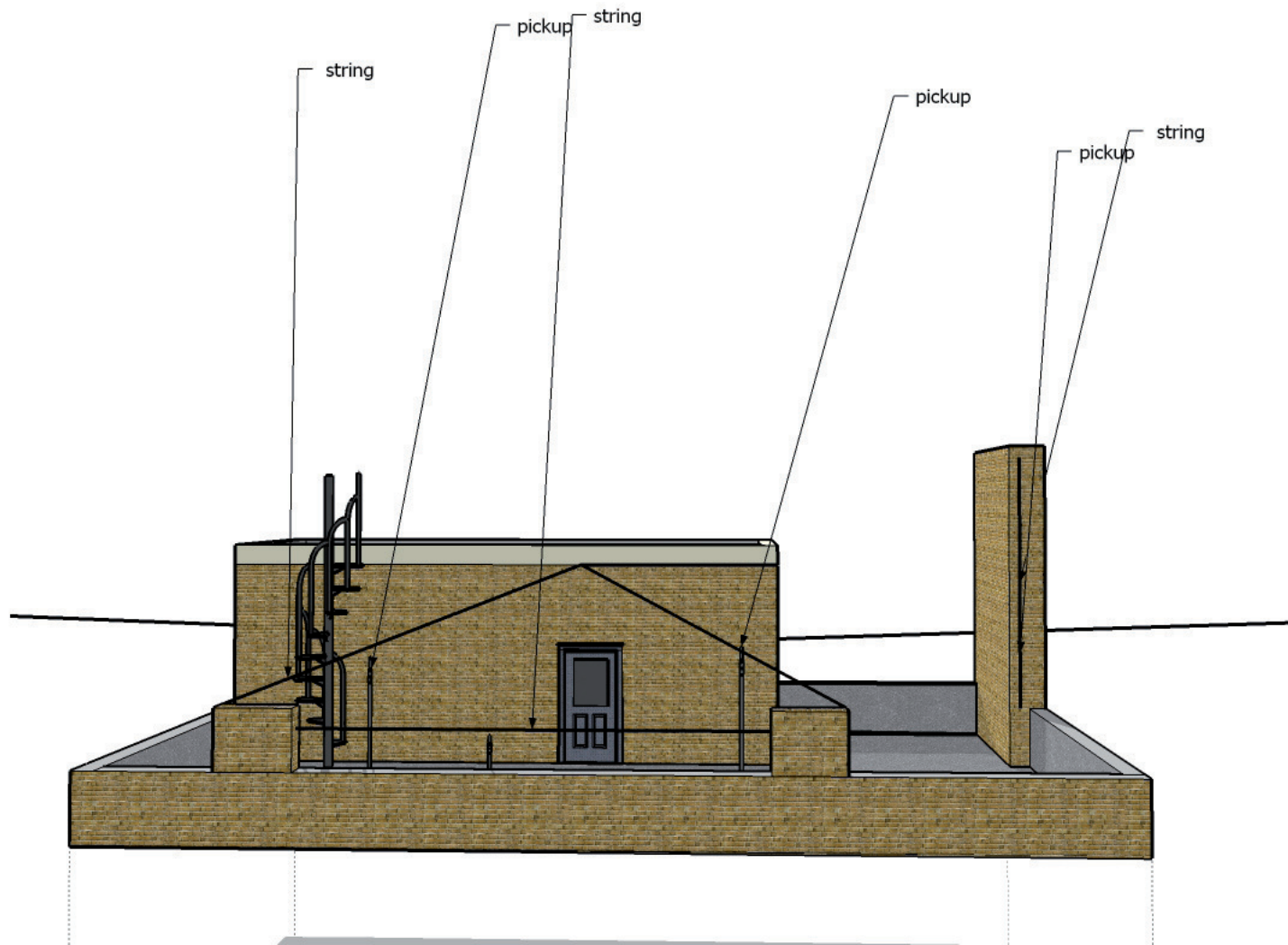
The sunlight paints an image of the outside world, and the wind plays the Aeolian strings. They are joined in one experience of image and sound, as a continuous inspiration.

## Aeolian strings

The wind has been a great source of inspiration for artists, poets and musicians. In Inspired, four aeolian strings are placed outside on the top of the room to catch the wind (see the upper image to the right and the sketches on the next page), on top of the KABK building, where the wind is free to play. Each string is recorded using electrical guitar pickups.

The overtone sounds from each string are reproduced inside the room by a separate speakers in the top angles of the room, one speaker for each strings.







## Aeolus *Keeper of the Winds*

Vibrating strings are fundamental in music. In the ear's snail shell, thousands of small strings vibrate to the music. Vibrating strings capture the sound with harmonic vibrations. In the voice box in the throat two vocal strings vibrate to make sound and music. Aeolus, the wind, finds vocal cords everywhere: in trees, between mountains and at sea; touching the strings of the world.

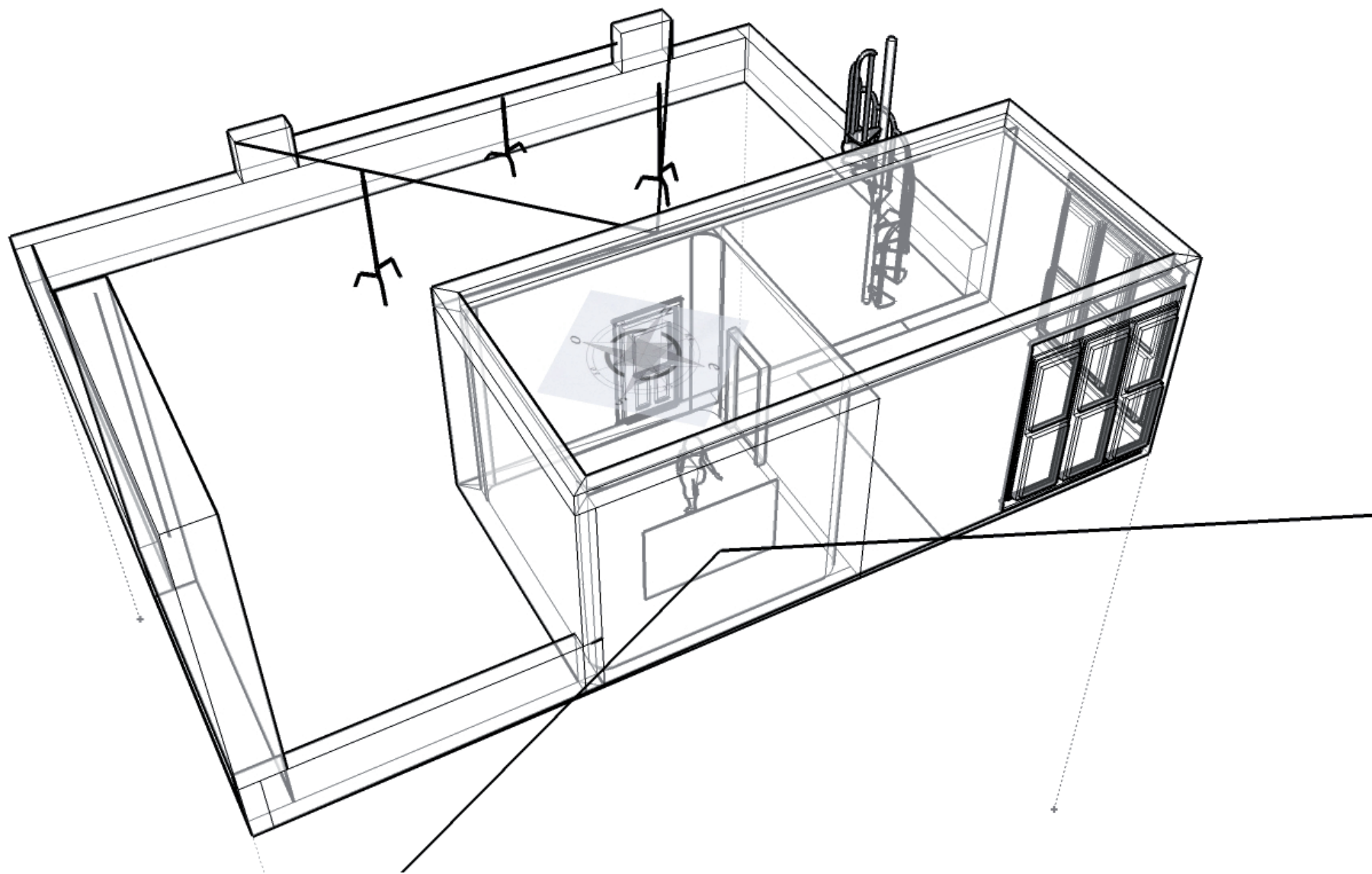
The combined strings sound the wind's musical piece, which is a dynamic interplay of changing airstreams. When the wind is very weak, then only the longest strings will vibrate making low sounds. When the wind is strong, also the shorter strings will play higher notes and the longer strings will start to sound their harmonics.

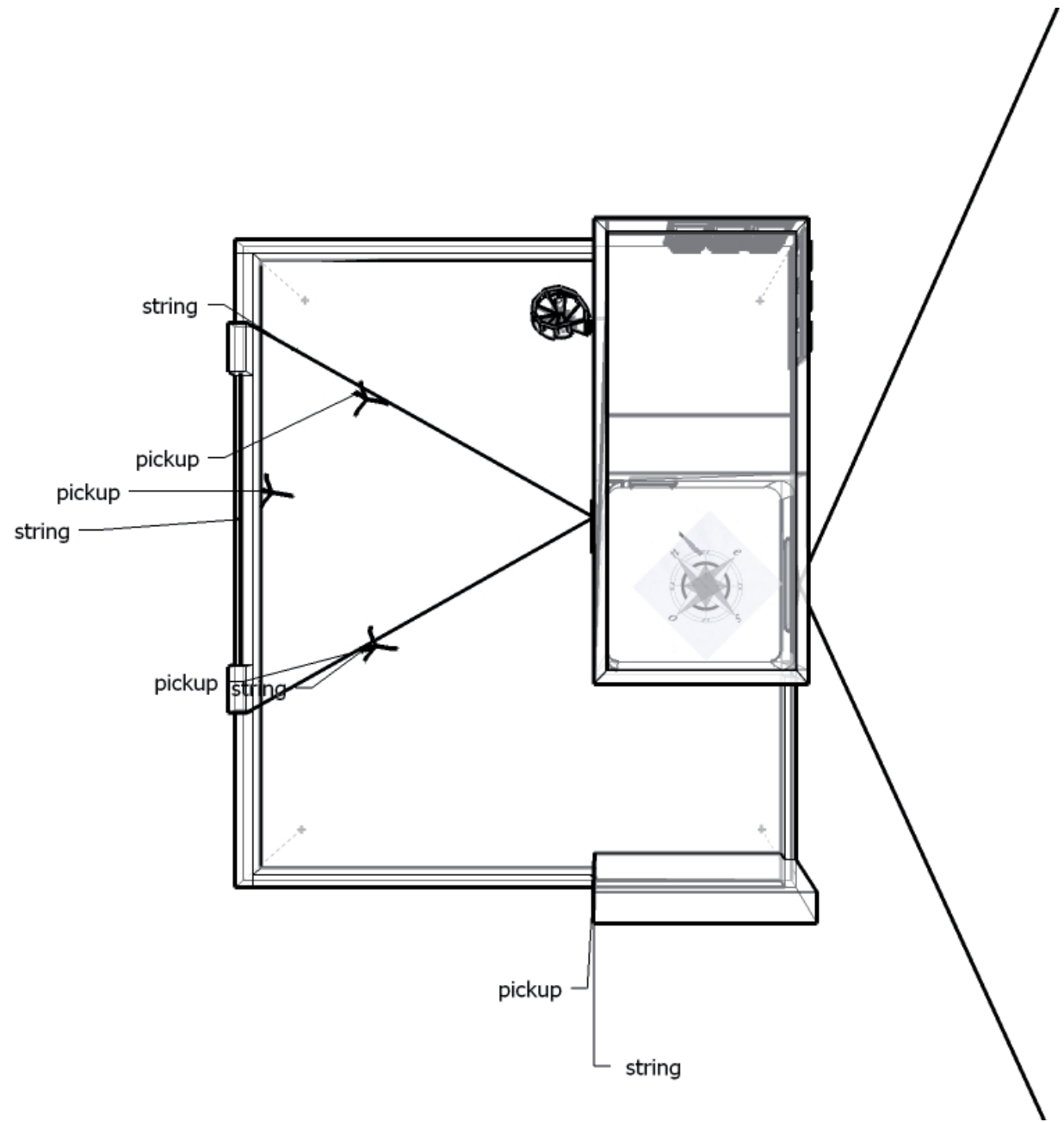
The aeolian strings in Inspired are Marc Vogel's Harpsichord strings (soft iron with a diameter of 1.27mm), which is good for capturing low winds and for the interaction with the electrical guitar pickup.

The sound of the electric guitar pickup reminds everyone of the beginning of the electronic music age. The pickup is a small coil with a magnet inside. The steel strings above the pickup become magnetized and, when they move, induce a very small current in the coil in the pickup. The pickups used are made of two reversely wound coils, *Humbuckers*, to cancel the electromagnetic noise. The pickups are mounted a bit below the string, positioned at one tenth of the length of the string. When the wind blows past a string, little curls of air form on either side of the string, creating an oscillation in the string. With the right wind, constant and strong, the oscillation matches the fundamental frequency of the string and an aeolian tone will result.

The four aeolian strings in Inspired are tuned according to the Pythagorean musical scale, to create the right sonic harmony. Using a monochord, Pythagoras created the musical intervals, by calculating the proportions of the strings. Some say that the musical scale is based on the Tetraktis; he divided a cord in two, the *Octave*, in three, the *Quinte* and in four, the *Quarte*. Each interval is another sinoid, a different resonant vibration of the string.

Pythagoras writes that the Sirens sing in the harmony of the Tetraktis, the *Harmony of the Spheres*. Pythagoras's Tetraktis became a mystical symbol which represents the harmony of the cosmos and the mysteries of the Divine. The cosmos made of harmonic vibrations...





## Lightspeaker

Lightspeaker projects an aura of the outside world in the dark ambience of the room.

The essence of the Lightspeaker is its hole, the white matter is sculpted around it.

Its image a play of diffraction patterns, the light rays soft and full.

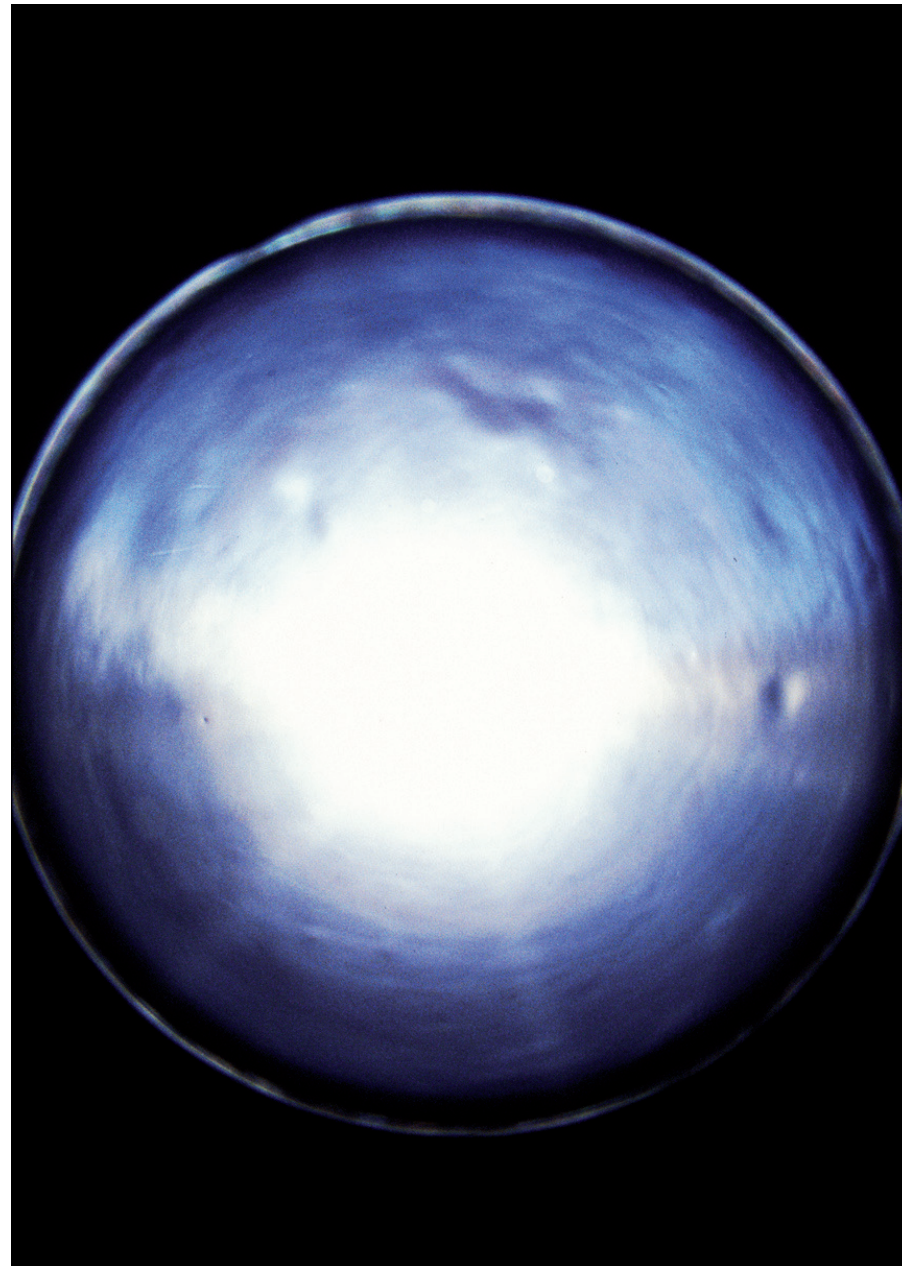
### *Pinhole*

The Lightspeaker is a sculpture that forms a building block of a Camera Obscura, a dark room with a pinhole lens to project the panorama on the walls. It is basically a cone cut out from a cube. At the point of the cone there is the pinhole lens, just a hole in the block.

### *Light diffraction*

The Camera Obscura effect is a metaphor of the human mind: *Imagination*.

Its image upsidedown is the symbol of an inner space.



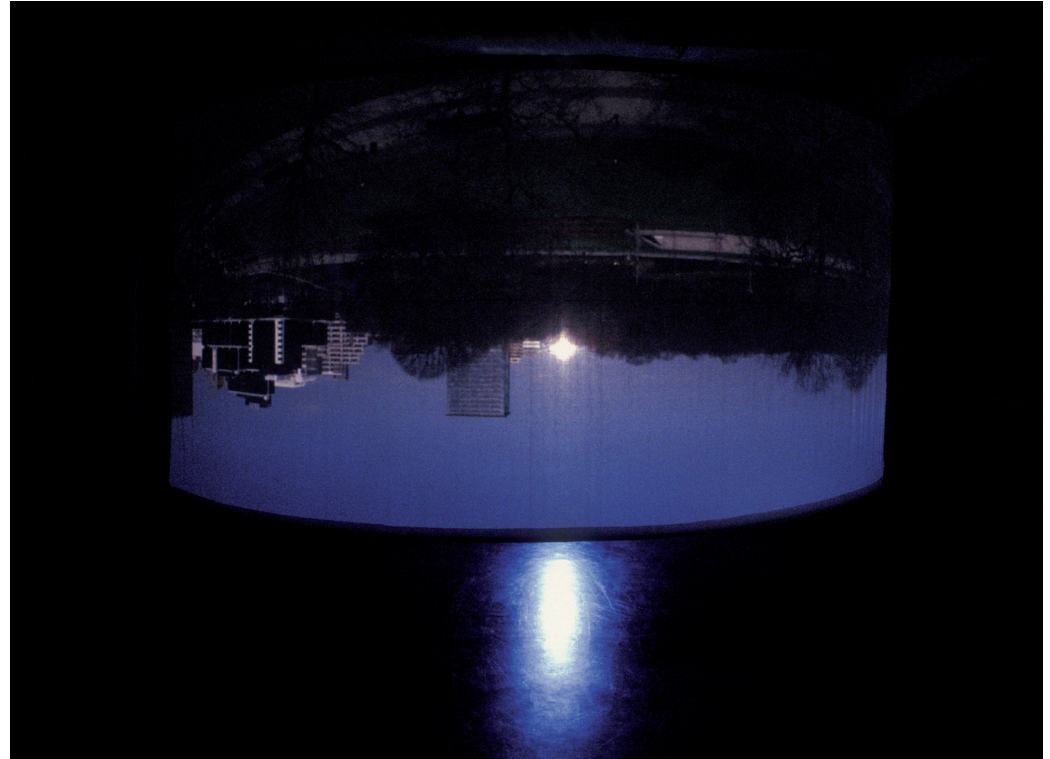


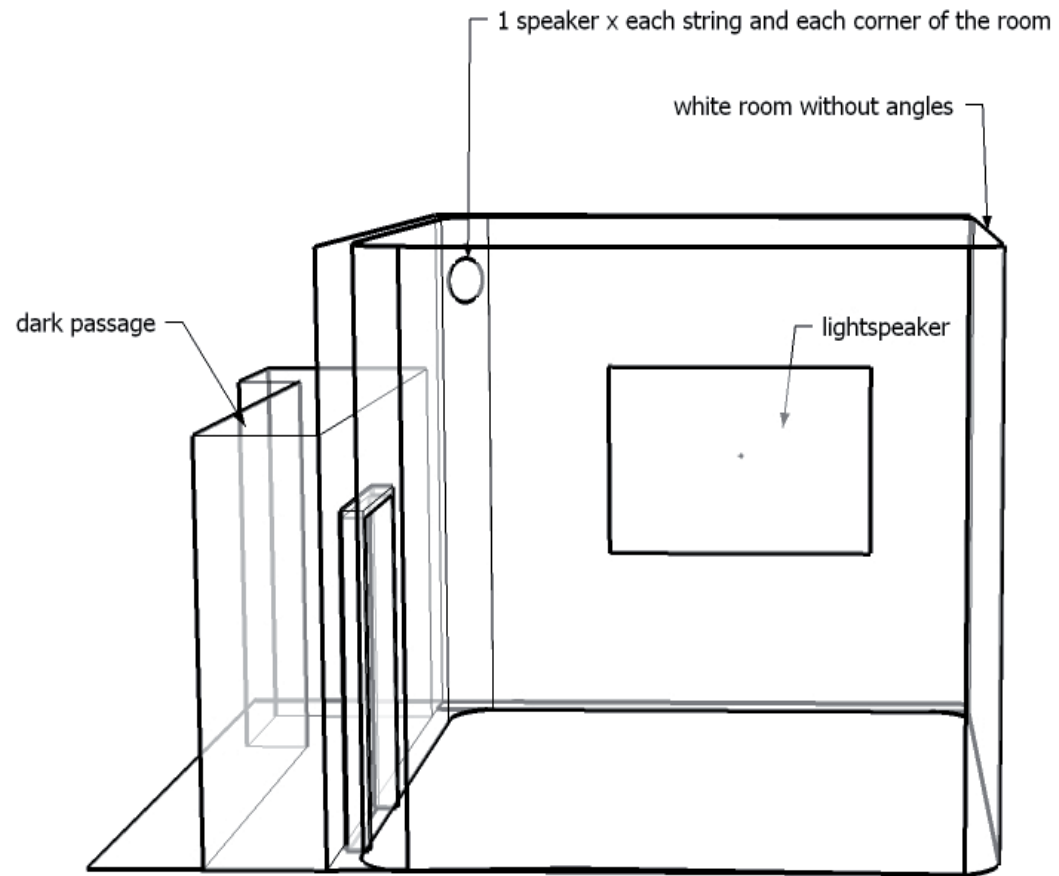
## Camera Obscura

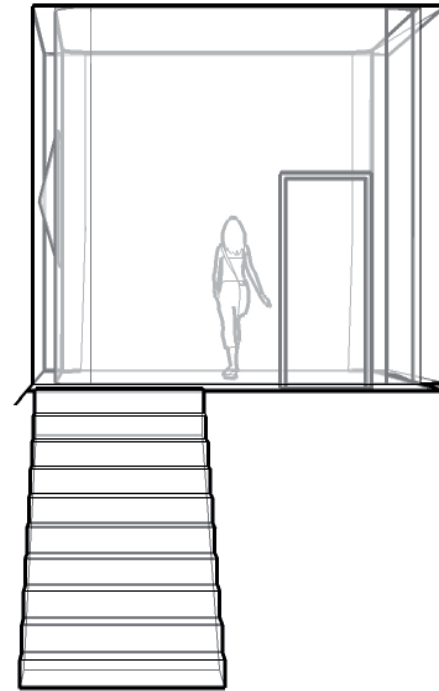
The effect of the Camera Obscura comes from the diffraction of the light, that passes through the hole, creating a reversed image on a screen facing the hole. The Camera Obscura was used extensively by artists from the Renaissance period to project, on screens or canvas, images that served as outlines to make drawings or paintings. In that time big progress was made in the study of perspective and for two centuries the perspection research was limited to just copying the projected image, not to mention the changes that came later with the arrival of the Photocamera, the Cinematograph of the Lumiere brothers, the Television. Leonardo Da Vinci himself, studying the reflection of light on spherical surfaces, had described a Camera Obscura, which he called Oculus Artificialis.

Nowadays, our image of the world is seen and perceived through an objective almost more than through actual experience. The sculpture Lightspeaker is a metaphor for the return to the root of things, and to the simplicity and the complexity of a hole in matter. In this case the Oculus Artificialis is a heavy and static block and the realty around it is depicted by the sun, in continuous mutation. The produced reversed image is a symbol of our internal space and the perception of the world which changes in relation to the macro and microcosmos, the internal and external space, the architecture of the mind and the architecture of nature.

*The image on the right is the projection of the Malieveld park and the railway station in front of the Royal Academy of Den Haag in the Netherlands.*







The room is white and the corners are round, the lightspeaker is on the left wall and projects the skyline of Den Haag onto the right wall.

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<http://maakali.org/inspired>

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