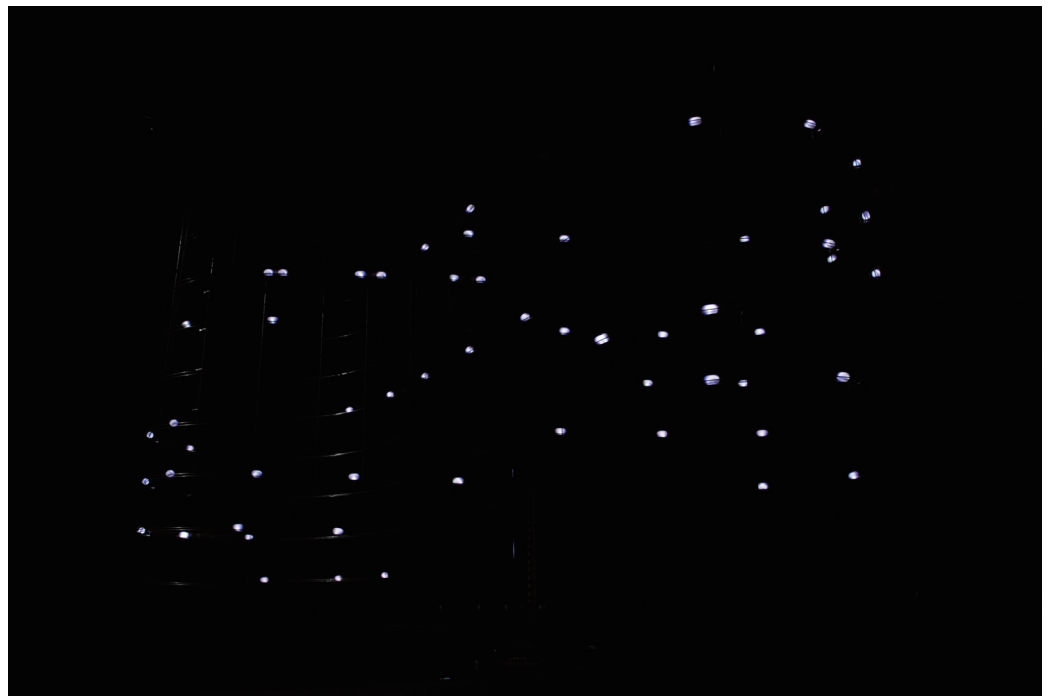
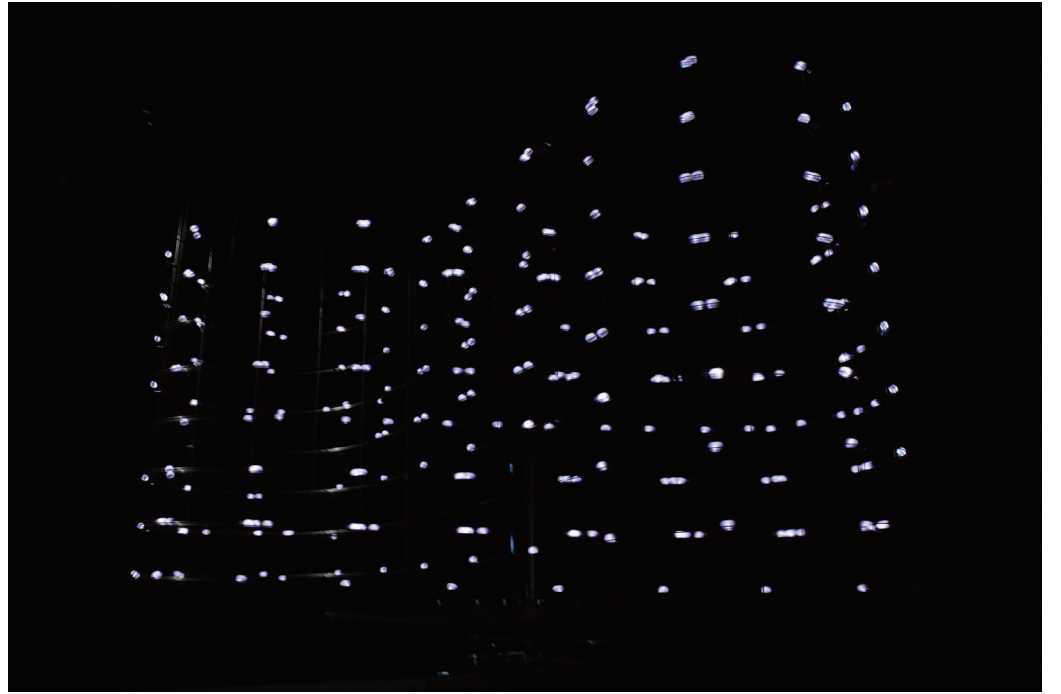


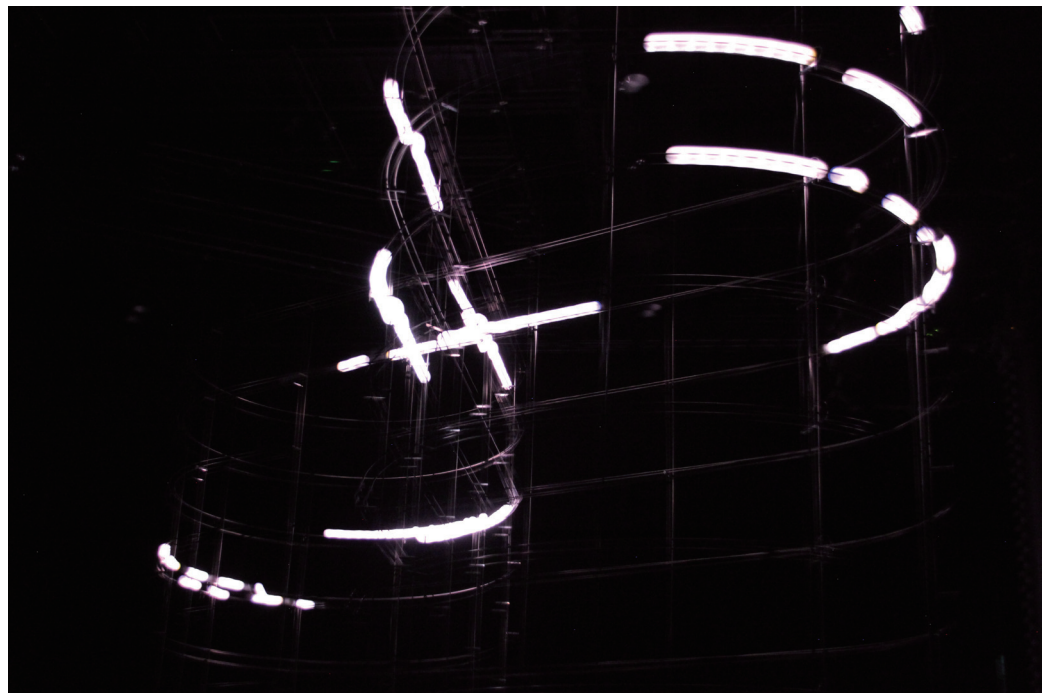
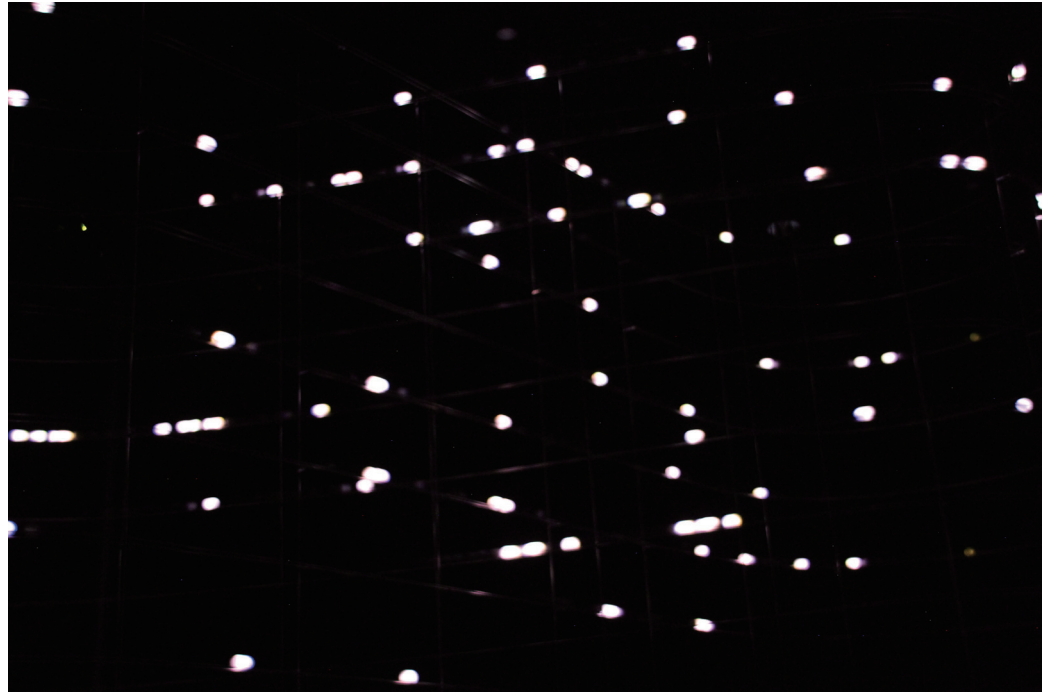
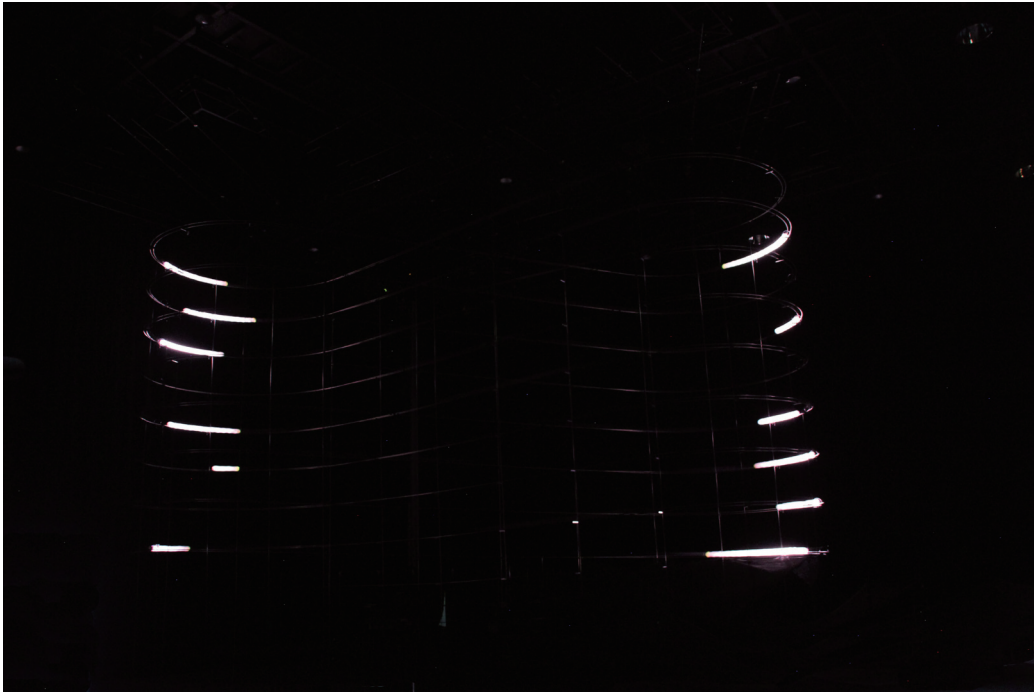
PARLIP  
daito manabe + mototishibashi

This is an art installation which is able to create a visionary beautiful dots pattern of blinking innumerable illuminations floating in all directions on the air.

The number of balls with a built-in LED, pass through one after another on the rail "8-spiral shape." We see this phenomenon like "the light particle float around" because the balls radiate in various timing.









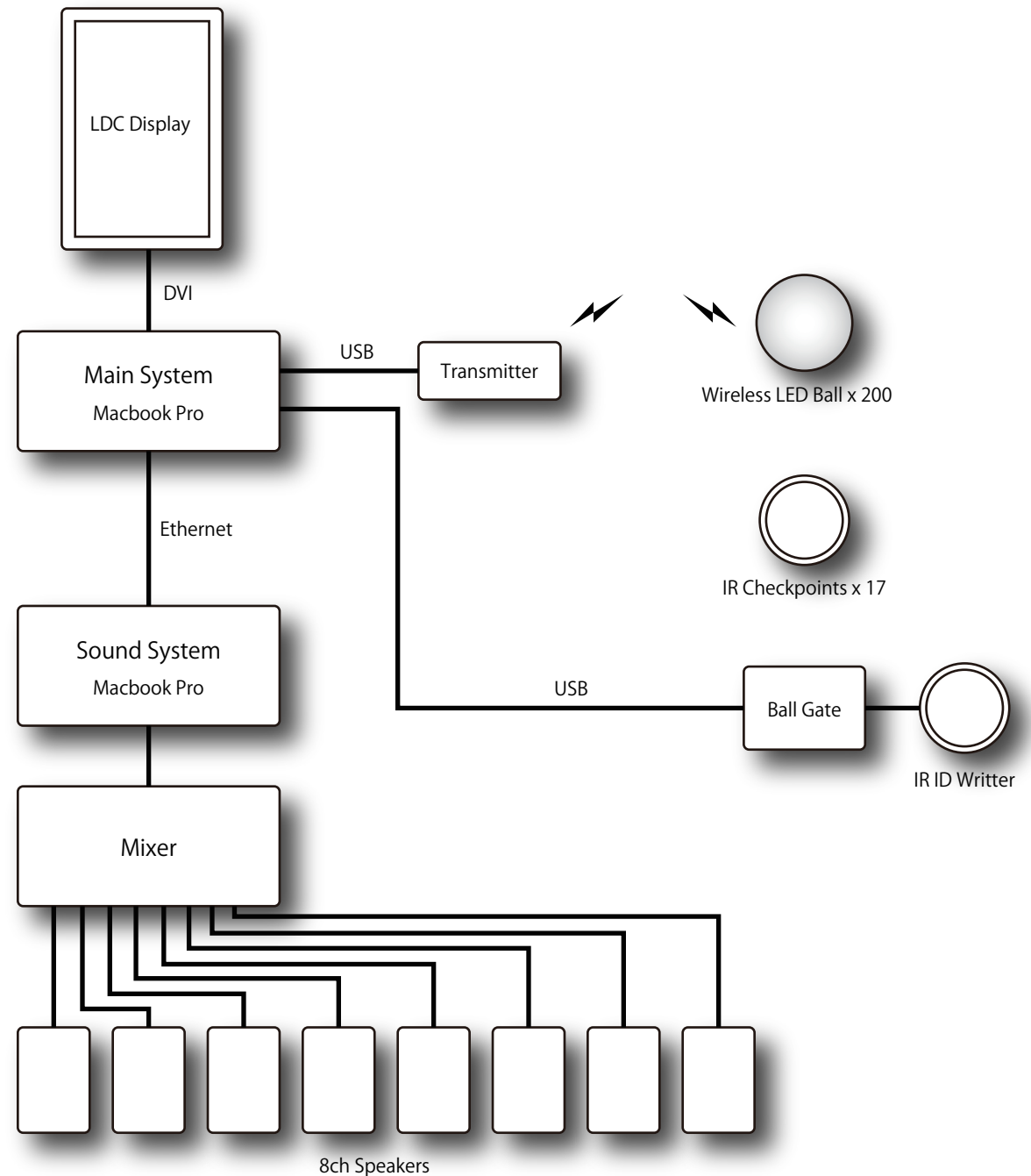
## System

The position of each ball is determined via total of 17 control points on the rail. Every time a ball passes through one of them, the respective ball's positional information is transmitted via a built-in infrared sensor. During the time the ball travels between one control points to the next, this position is calculated based on its average speed. The data for regulating the balls' luminescence are divided by the control point segments and are switched every time a ball passes on a control point. The audiences can select a shape from several patterns floating in aerial space using an interface of the display.

The activation of the virtual balls on the screen are determined by the timing which a ball moving on the rail passes through a certain check point on the rail and the speed which is calculated by using average speed values.

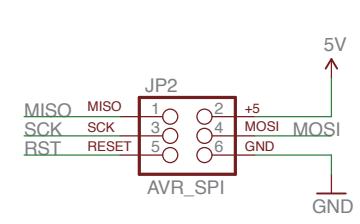
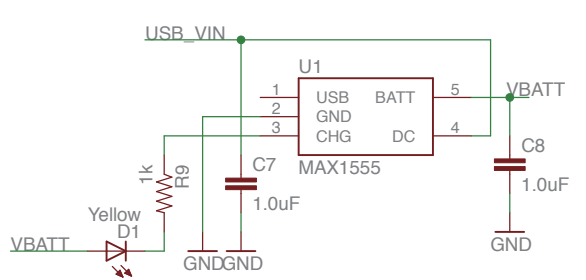
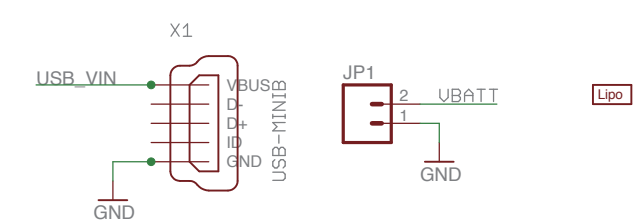
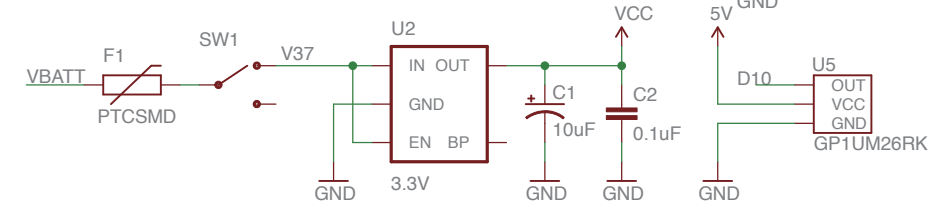
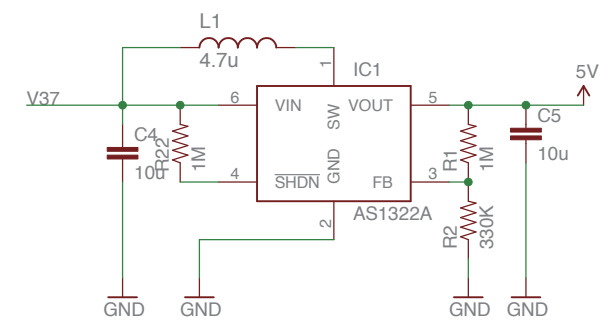
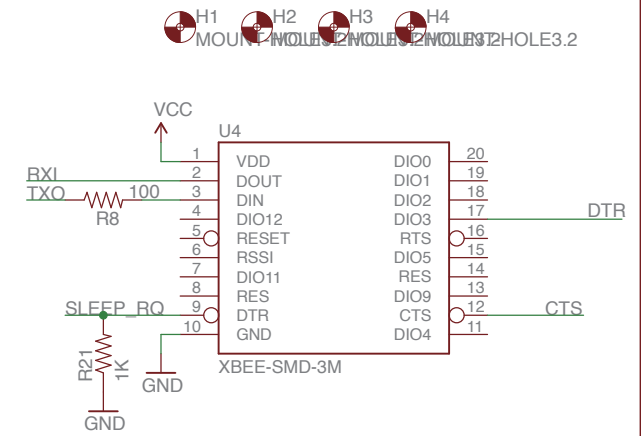
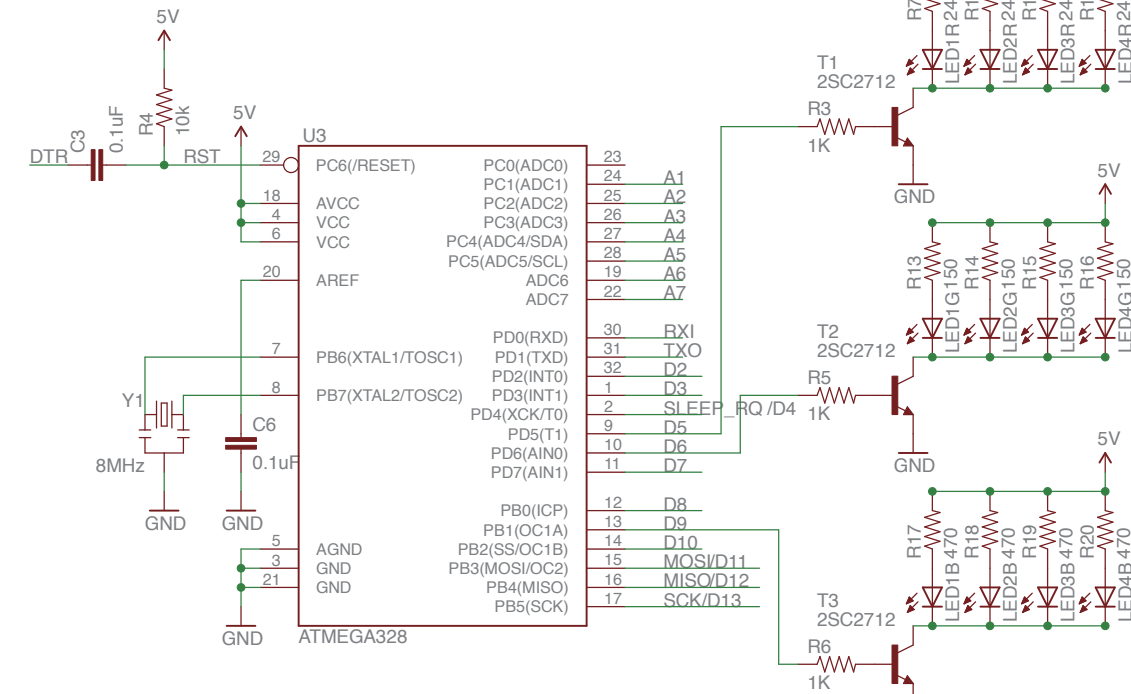
The sound is generated from the ball positions and the information of LED flash pattern and is played through 8ch speakers.

The board inside the ball is an Arduino compatible board based on the original design from Arduino Fio v2.1.



Original design by  
Shigeru Kobayashi (Arduino Fio v2.1)  
desgin by Motoi Ishibashi

GND  
AREF  
5V  
RXI  
TXO  
DTR



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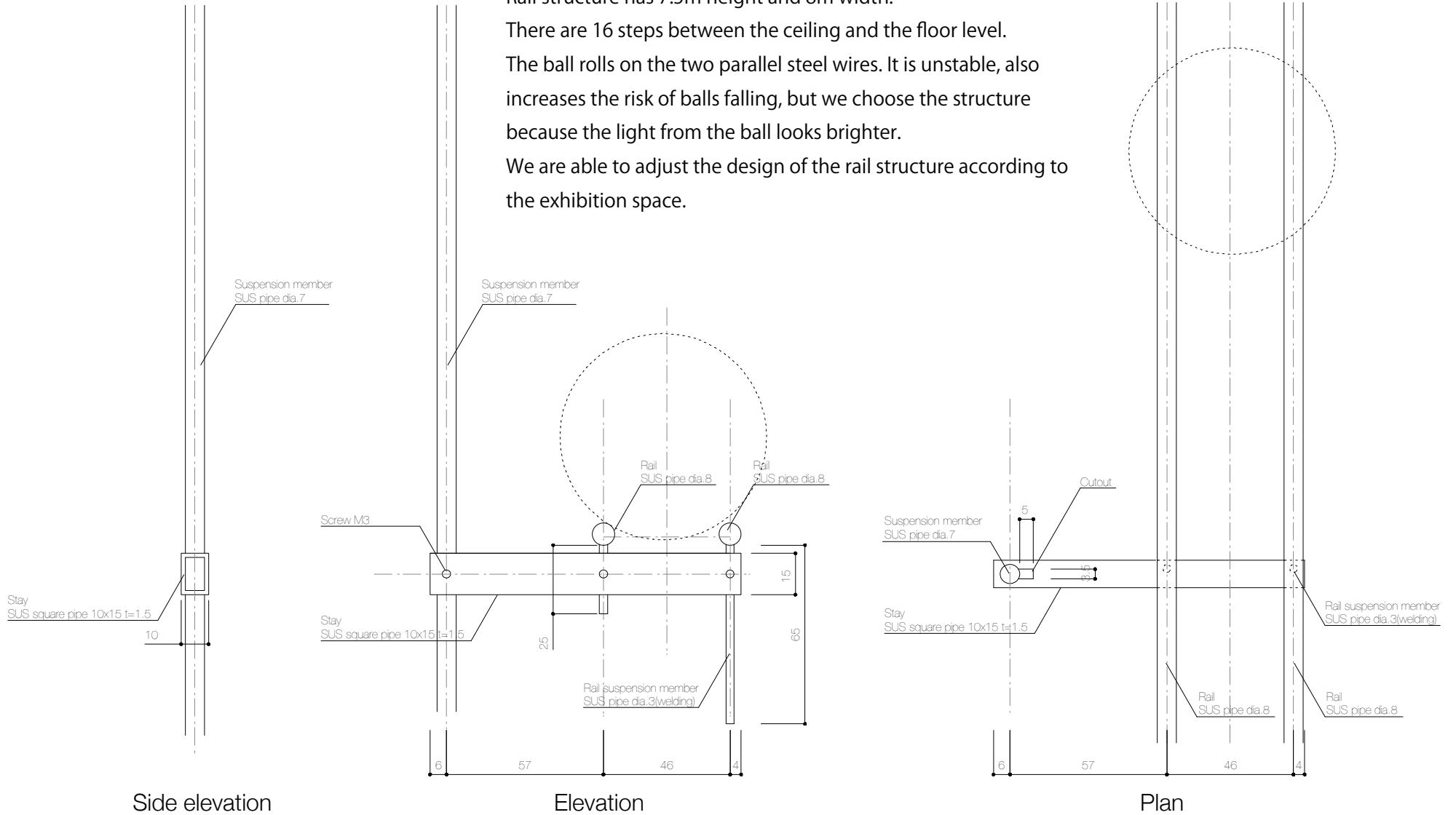
# Rail Design

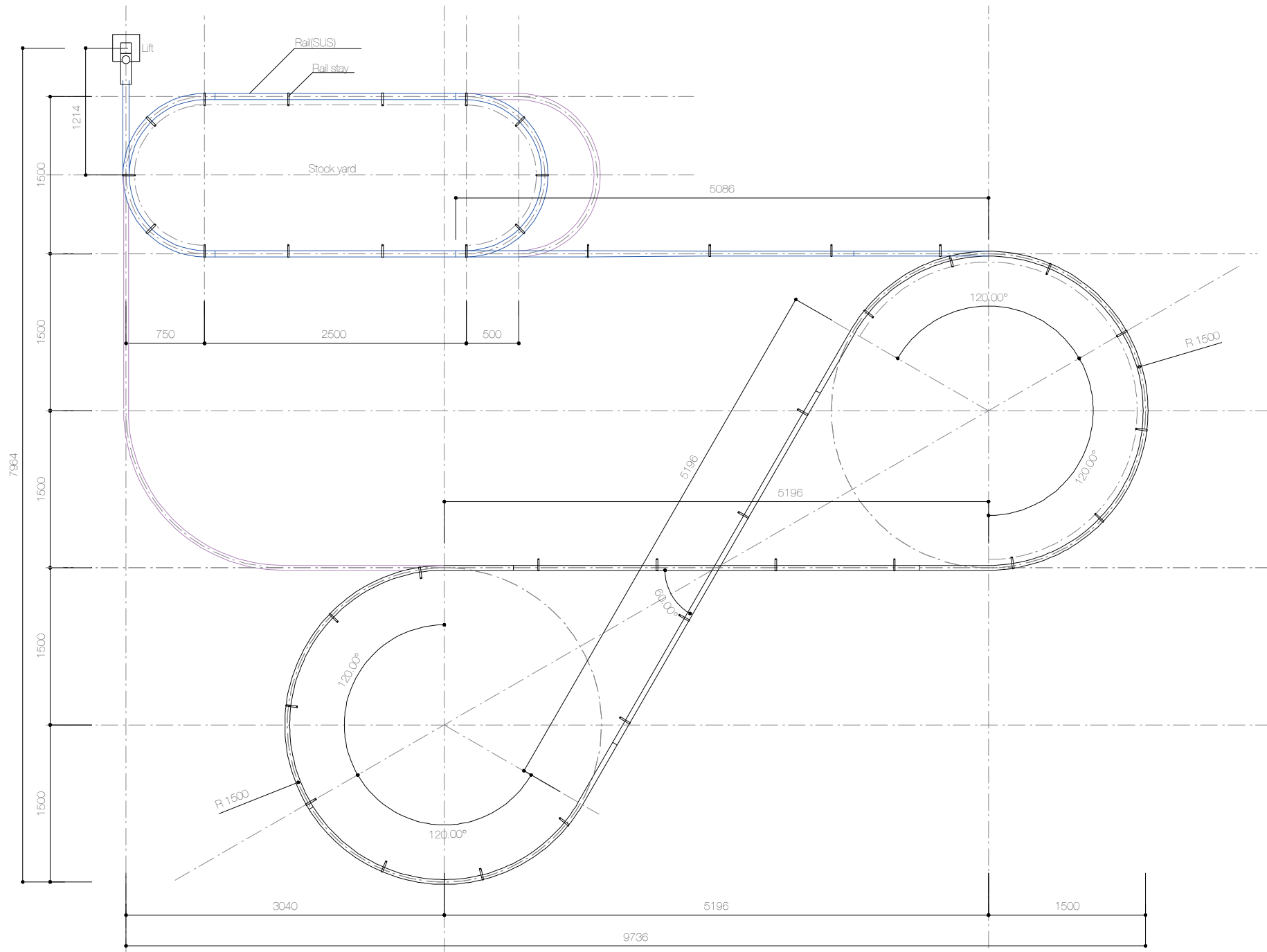
Rail structure has 7.5m height and 8m width.

There are 16 steps between the ceiling and the floor level.

The ball rolls on the two parallel steel wires. It is unstable, also increases the risk of balls falling, but we choose the structure because the light from the ball looks brighter.

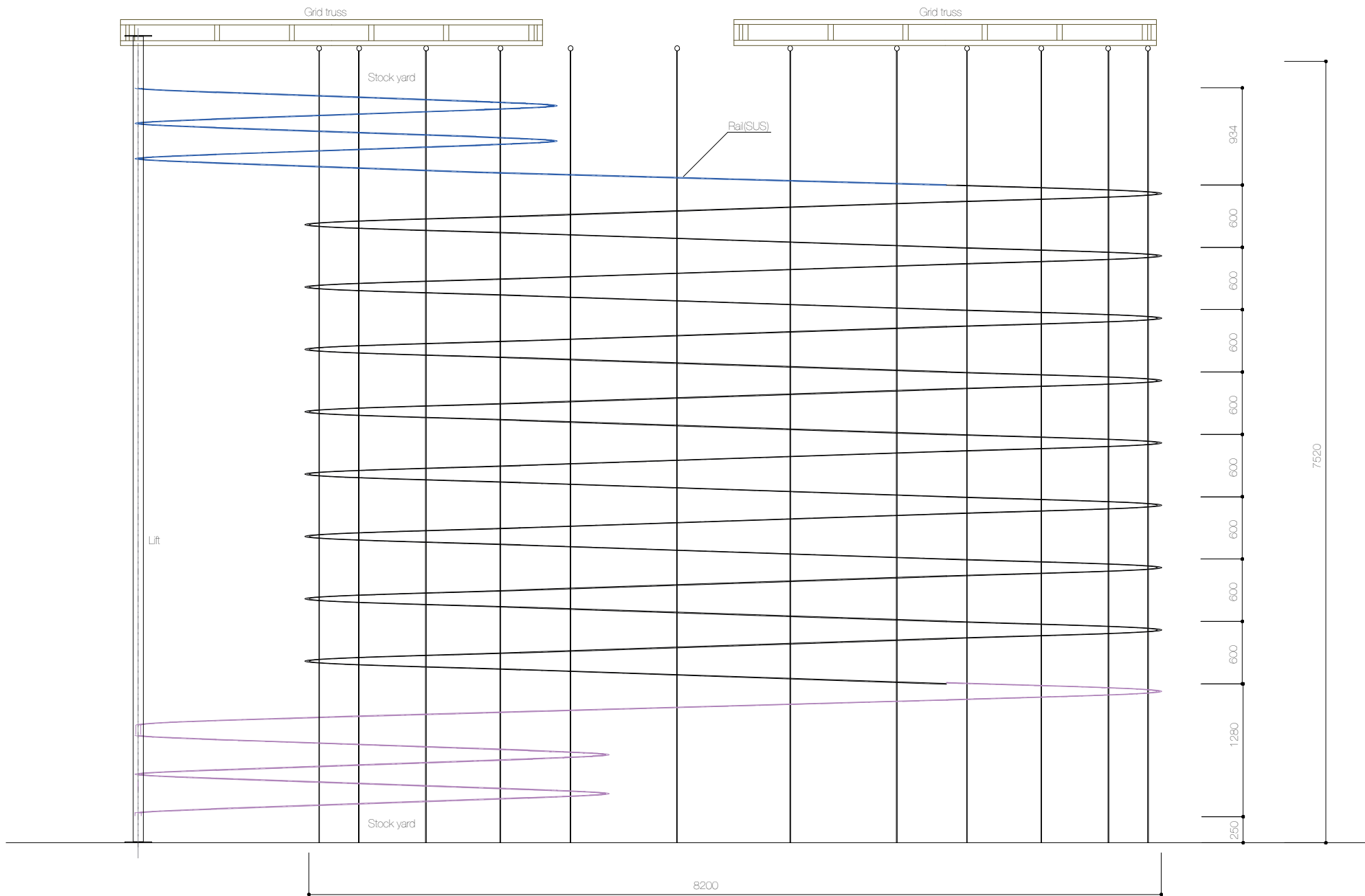
We are able to adjust the design of the rail structure according to the exhibition space.





Particles Plan  
 scale = 1:50 unit=meter 28 March 2011





Particles Section  
 scale = 1:50 unit=meter 28 March 2011

## Credits

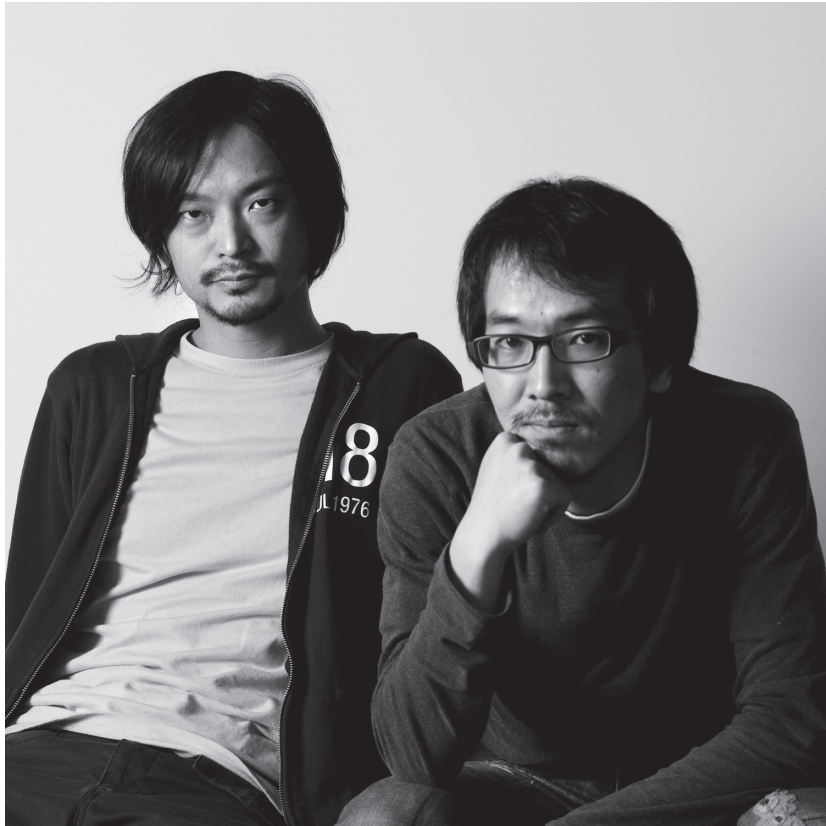
<b>Planning and software development</b>	_____	Daito Manabe(4nchor5 La6, Rhizomatiks)
<b>System design and hardware development</b>	_____	Motoi Ishibashi(4nchor5 La6, Rhizomatiks, DGN)
<b>Rail structure design and production</b>	_____	Seiichi Saito(Rhizomatiks) Youichi Sakamoto(Rhizomatiks)
<b>Ball design and development</b>	_____	Tomoaki Yanagisawa(4nchor5 La6)
<b>Lift structure design and production</b>	_____	Yukio Akiba(Gadget)
<b>Graphic design</b>	_____	Hiroyasu Kimura(Rhizomatiks) Megumi Shima(Rhizomatiks)
<b>Document video filming and editing</b>	_____	Muryo Homma(Rhizomatiks)
<b>Planning support</b>	_____	Ichiro Kojima(Rhizomatiks)
<b>Onsite support</b>	_____	Kanta Horio(4nchor5 La6)
<b>Production support</b>	_____	Kensuke Fujishiro(Rhizomatiks)
<b>special thanks</b>	_____	MIKIKO and poko
<b>Photos</b>	_____	Ryuichi Maruo(YCAM)
<b>Technical support</b>	_____	YCAM InterLab
<b>Cooperation</b>	_____	Yamaguchi Center for Arts and Media [YCAM]

*rhizomatiks*

4nchor5 la6



山口情報芸術センター  
Yamaguchi Center for Arts and Media



## **Daito Manabe**

Working across different fields including art, design and research, Manabe has approached and redefined existing media and technologies from their own unique angles. Instead of using technologies to achieve an ever “higher-resolution” illusionistic reality, his works aim at rediscovering the beauty of transient events through careful observations and exploration of the basic properties of body, computer and computer programming.

## **Motoi Ishibashi**

Studied control system engineering at the Tokyo Institute of Technology followed by mechanical engineering and image processing engineering at the International Academy of Media Arts and Science in Gifu, Japan, thus initiating the foray into digital media production.

Currently pursuing new artistic methods in embracing the visual environment as well as devising engineering solutions for art production and public interactive spaces. Began the “DGN Co.,Ltd.” in 2006 in the development of creating designs and devices for interactive systems. Began geek’ s laboratory “4nchor5 la6” with Daito Manabe in 2008.