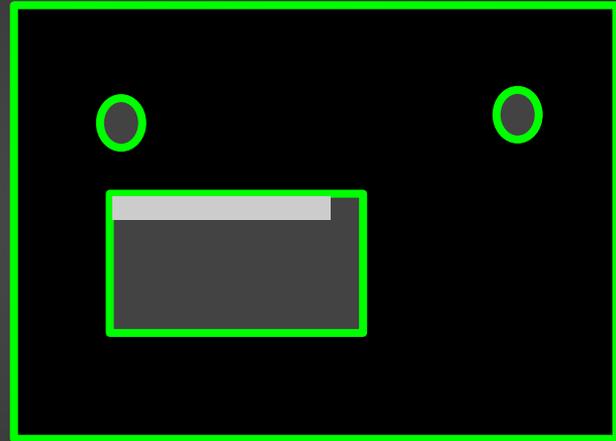


# A Synesthete's Dream

# Team: Neon Blackboard

**Captain:**  
**Gentry**

```
String [] members = {  
    klm,  
    Shubhank,  
    Willie,  
    E,  
    yMeng,  
    zZie  
}
```



# INSPIRATION

## Synesthesia

$$7 = \text{yellow} \quad 9 = \text{blue}$$

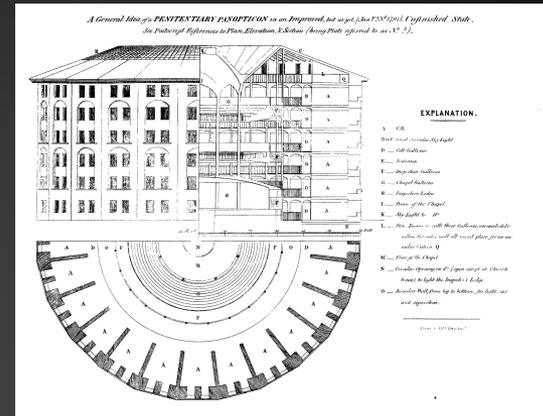
$$5 + 2 = ? \text{ yellow}$$

$$6 + 3 = ? \text{ green}$$

Can you  
hear the  
colors?

Synesthesia is a neurological phenomenon in which stimulation of one sensory or cognitive pathway leads to automatic, involuntary experiences in a second sensory or cognitive pathway.

## Panopticon



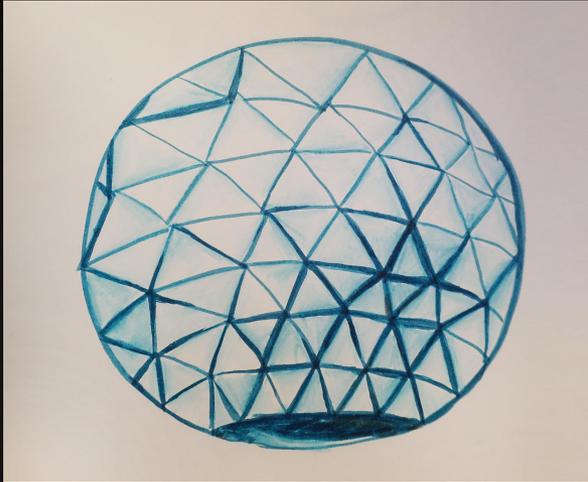
This prison model is able to operate regularly with only one watchman. It is an ideal way of controlling all the prisoners.

# CONCEPT

## A Synesthete's Dream

is a fully immersive head mounted apparatus that transmits audio signals generated via a midi device where the audio is transmogrified into alternate sensory data for the wearer to interpret. The midi device also outputs sound for a general audience to hear. However, the wearer of the helmet is completely oblivious to the sounds they produce from the midi device and the effects it has on the world beyond the confines of the helmet. The wearer is aware only of their influence on the world by the various sensory inputs within the helmet. Inputs stimulate all senses except for hearing.

# DIAGRAM



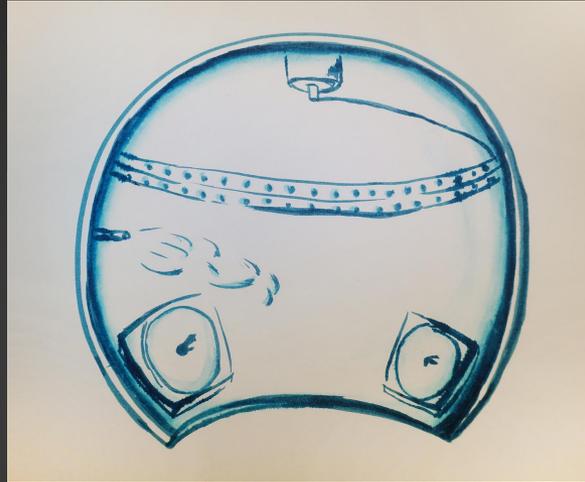
## Appearance

Helmet

Opened by a Hinged Window

Acoustic Foam

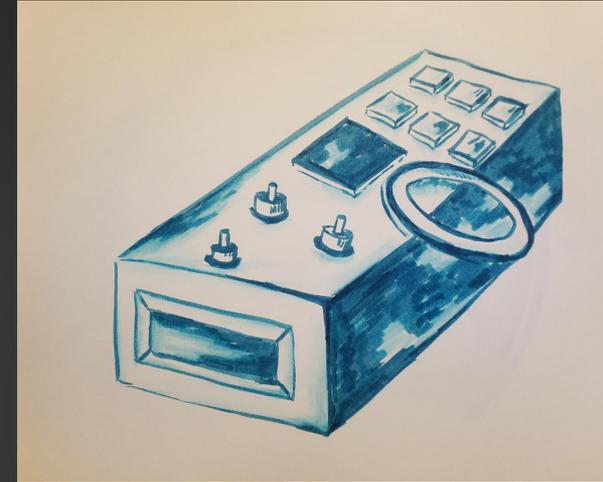
Speakers



## Output

Visual and physical sense output built inside the helmet (e.g. LED Screen Display, vibration)

Audio output built outside the helmet (e.g. noise, human voice, loud music)



## Input

Portable controller connected to the helmet

Multiple sensors trigger the output

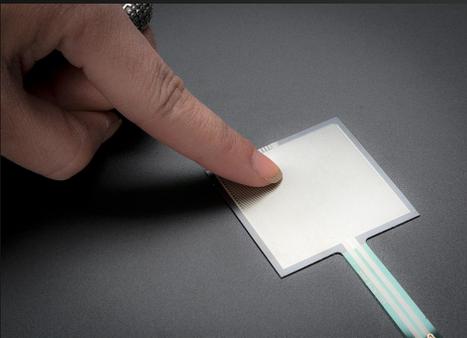
# PURPOSE

- An imitation of an amplified experience of synesthesia
- An experimental method of communication
- An apparatus with panoptic control and power
- An innovative interpretation of the relationship between the private and the public

# Example 1:

## Disruptive Music to Hypnotic LED Display with Dramatic Vibration

### Controller



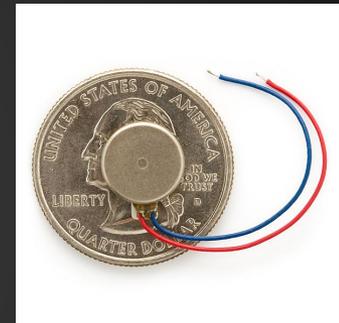
Force Sensor

### Helmet (Outside)

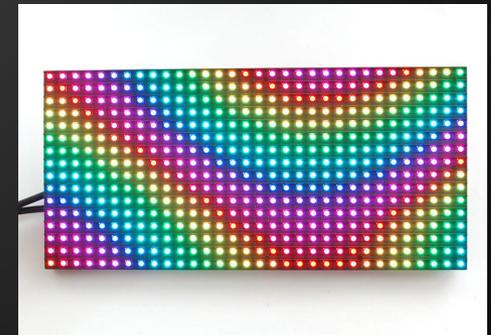


Speaker

### Helmet (Inside)



Vibration Motor

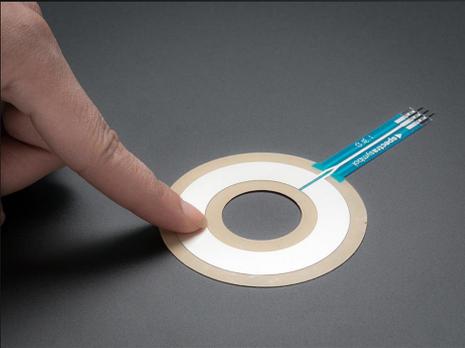


LED Screen

# Example 2

## Sound of Scream to Color Numbers on LED Screen with Intermittent Vibration

### Controller



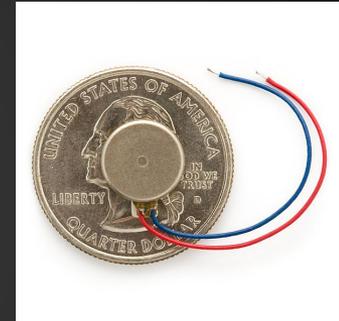
Circular  
Potentiometer

### Helmet (Outside)



Speaker

### Helmet (Inside)



Vibration Motor



LED Screen

# MATERIAL LIST

## Input

Button

Potentiometer

Force Sensor

Flex Sensor

## Output

Speaker

Amplifier

LED Screen

Vibration Motor

## Others

Arduino

Arduino Audio Shield

Acoustic Foam

Wire

Cables