

pulse/shadow

Technical Rider

Version 1 – 2025

Kylar Gardner

Materials Provided by Artist

Transducers

4 x large tactile transducers – Dayton Audio BST-300EX

2 x medium tactile transducers – Dayton Audio BST-1

3 x small surface transducers – Dayton Audio DAEX25

Audio Power Amplifiers

2 x Crown XLS 1502, 525W+525W – powered by 120V AC

1 x Fosi Audio TPA3116 V1.0B, 50W+50W – powered by 19V DC adapter

2 x Drok PAM8406, 5W+5W – powered by 5V DC

Embedded Computing + Sensor System

1 x BeagleBone Black, single-board computer (flashed with Bela software)

1 x CTAG Beast Capelet, multi-channel Linux audio system

1 x Arduino Microcontroller – serial connection to BeagleBone Black

1 x Pulse Sensor Amped by Adafruit – heart rate input to Arduino

1 x Pure Data patch uploaded via Bela IDE, running on BeagleBone Black

Cables + Power

Speaker wiring: 10AWG, 12AWG, 14AWG, 16AWG (various lengths, cut to room size)

3 x 3.5mm to stereo RCA audio cables

2 x 3.5mm stereo audio cables

5 x moxex to 3.5mm stereo audio adapter cables

1 x USB cable (Arduino to BeagleBone Black)

4 x 5V portable power supplies for BeagleBone Black, Arduino Uno R3, 2 x Drok PAM8406

Sculpture Elements + Additional Materials

2 x cajons

1 x Steel plate (1/16 in x 4 ft x 6 ft, T x W x L) + support frame for suspension

1 x Copper plate (1/16 in x 3 ft x 1 ft, T x W x L) + support frame for suspension

1 x glass bowl and display stand

Sculpture Elements + Additional Materials (cont.)

6 x clear, cylindrical glass vases (transparent to highlight colored water and transmitted light)

6 x LED lights (taped to floor behind vases)

Table (~24 in x 24 in x 27 in, L x W x H) + tablecloth

Various Objects – clock parts, mirror fragments, deconstructed lamp

Metal and mirror shards

Gaffer tape

Materials Required from Venue

2 standard 120V AC wall outlets

Water to fill glass bowl and vases

Setup

The artist will complete full installation of the work. Setup requires approximately 4 hours in the exhibition space prior to opening. This includes:

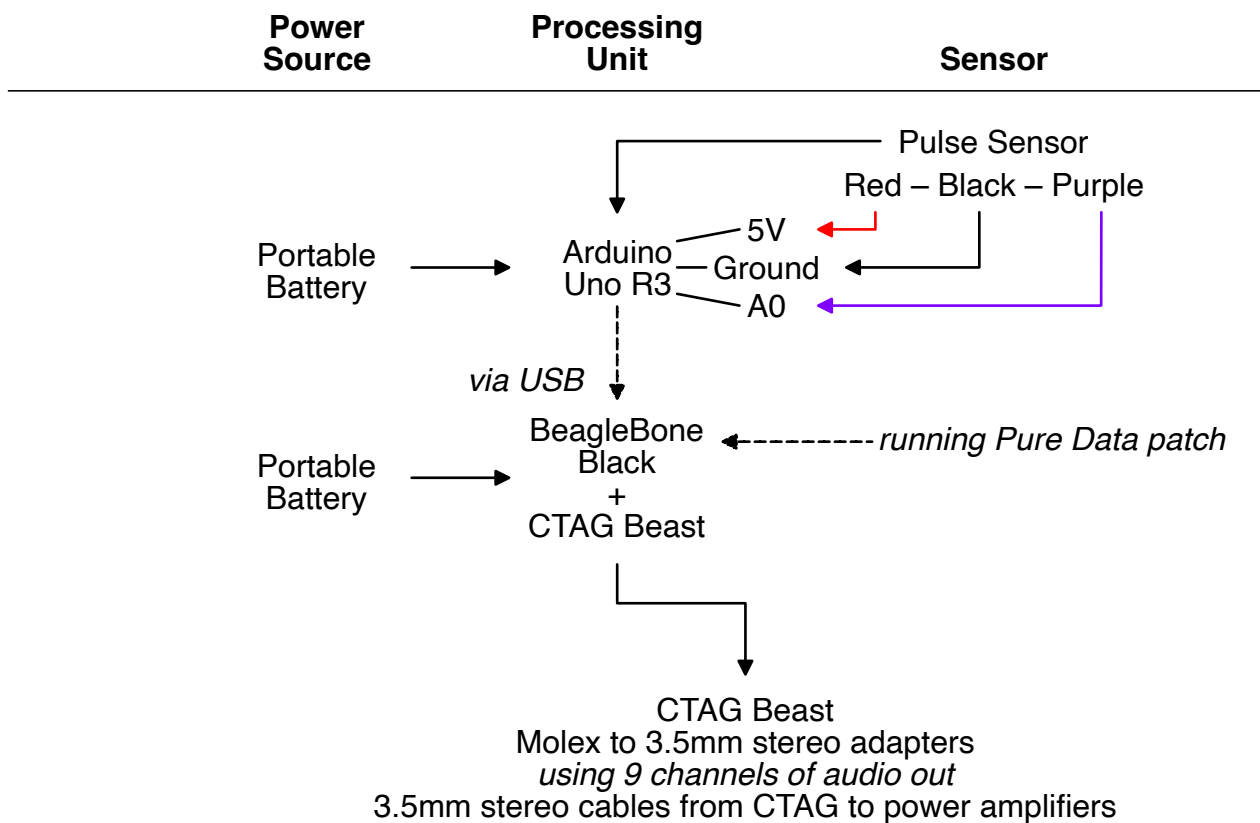
- Placing sculpture elements and pathway materials according to the spatial diagram
- Running power and audio cables according to the routing diagram (all cables are provided and secured by the artist)
- Connecting amplifiers and embedded processing units (BeagleBone Black + Arduino)
- Calibrating audio and testing sensor input

No additional technical labor from the venue is required beyond access to power outlets and water.

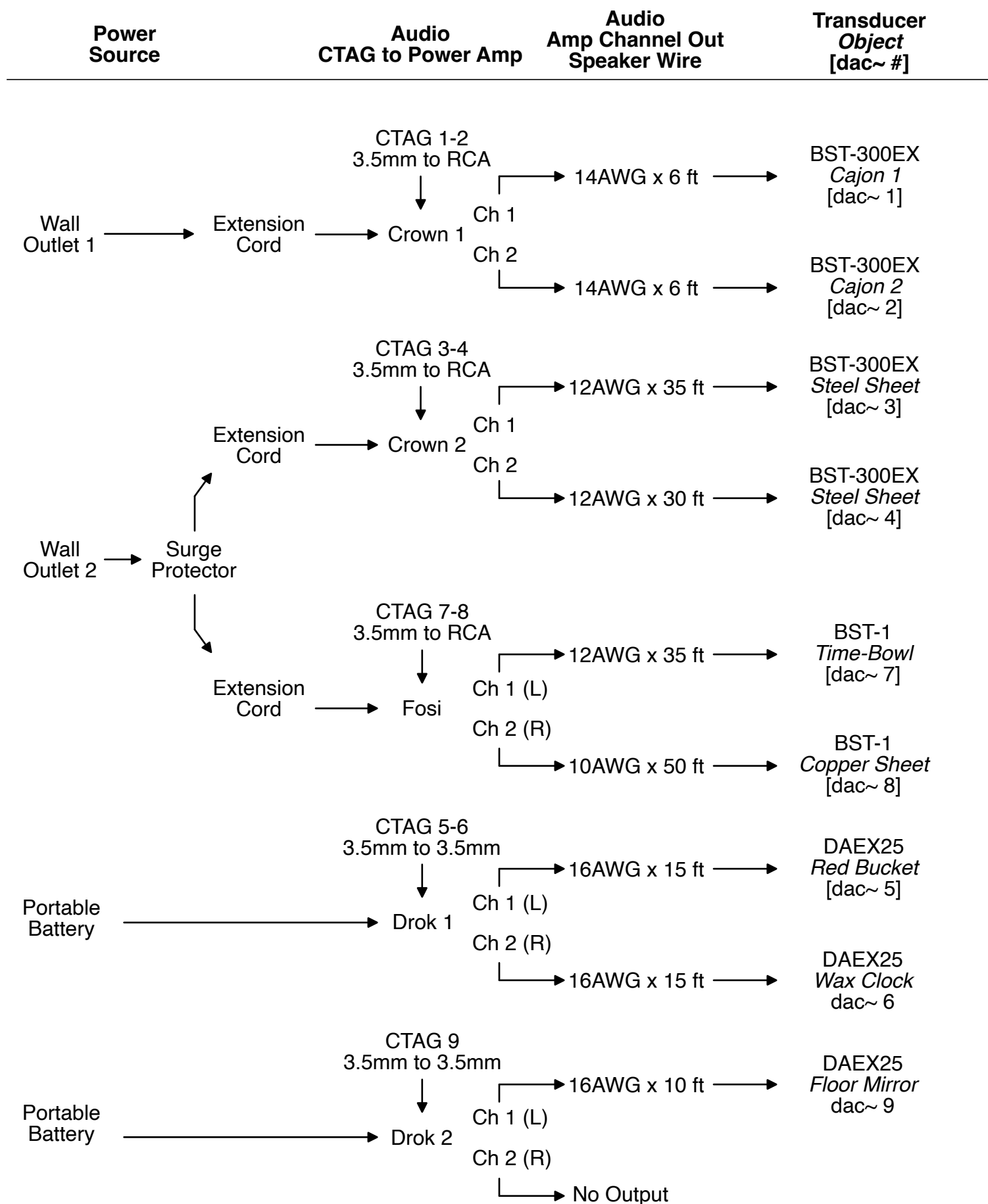
Diagrams

1. Embedded Processing Units + Pulse Sensor
2. Power and Audio Connections
3. Legend for Spatial Layout
4. Spatial Layout

1. Embedded Processing Units + Pulse Sensor

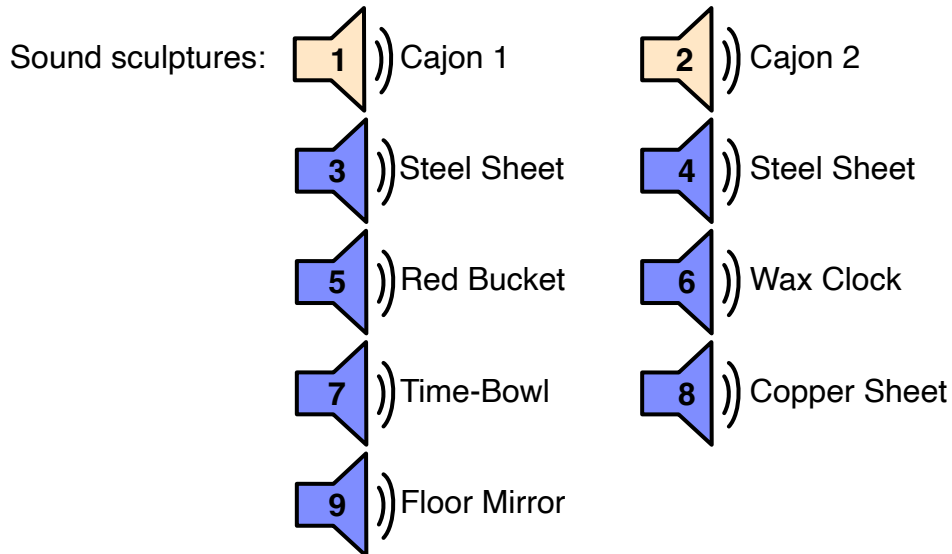


2. Power and Audio Connections



3. Legend for Spatial Layout

- # Sound sculptures with attached transducers (# = dac~ # in Pd)
- # Beige color indicates audience interactivity



- Power Source
 - 2 x standard 120V AC outlets (cords secured by gaffer tape)
 - 1 outlet to 1 extension cord for 1 Crown
 - 1 outlet to 1 surge protector to 2 extension cords for 1 Crown + 1 Fosi Audio



Power Amplifier x 5 (all stereo audio)

- 2 x Crown XLS-1502 (120V from outlet)
- 1 x Fosi Audio TPA3116 V1.0B (19V DC adapter, from outlet)
- 2 x Drok (2 x 5V portable batteries)

- Speaker wire (secured by gaffer tape)



Fabrication (housing power/audio cables or supporting sculpture objects)



Embedded Processing + Pulse Sensor

- BeagleBone with CTAG Beast Cape & Arduino (2 x 5V portable batteries)

Additional sculpture elements with no sound component



= clock / clock parts



= mirror fragments



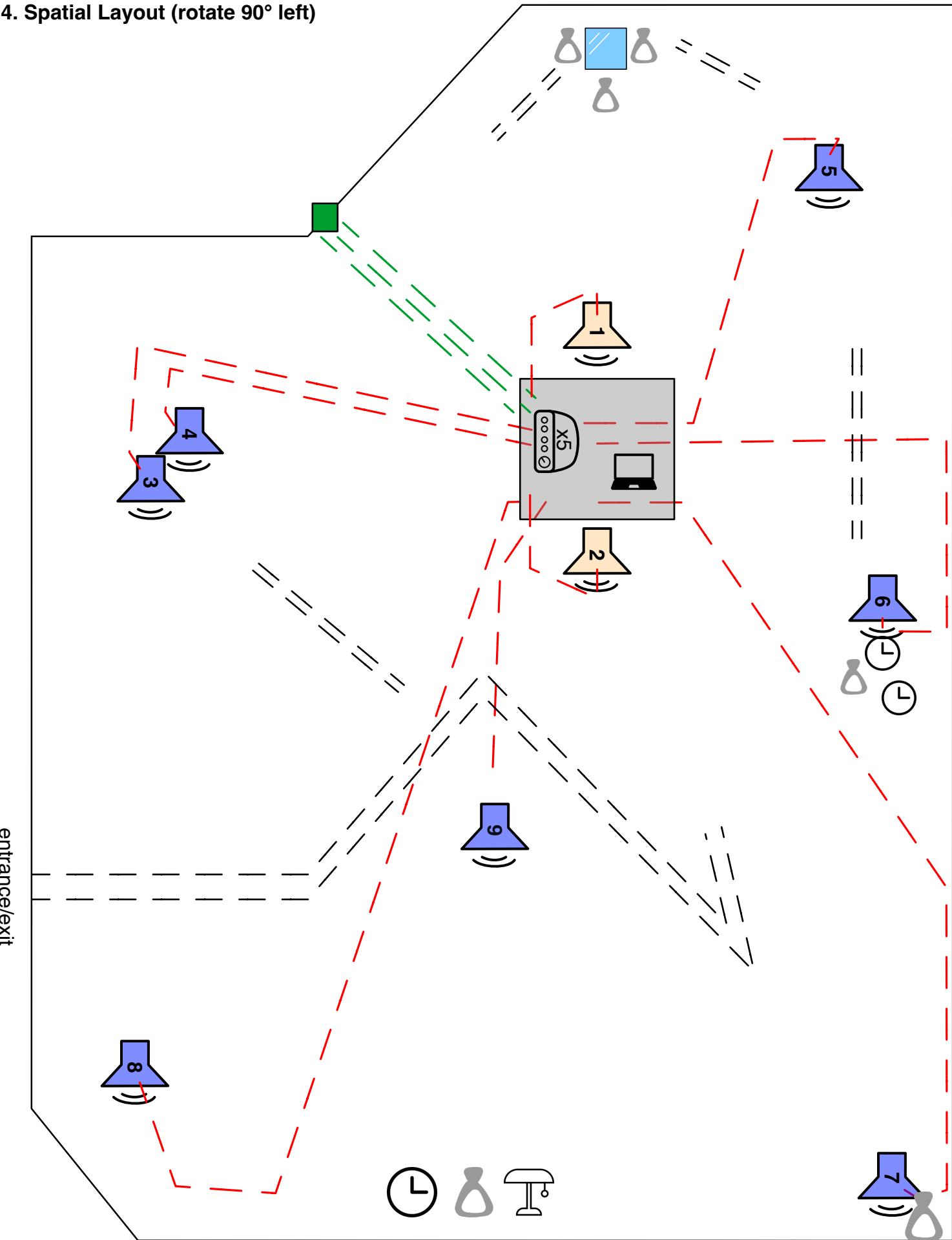
= deconstructed lamp



= vases

- Pathways (shards of metal/mirrors placed on floor)

4. Spatial Layout (rotate 90° left)



Images of Objects

1 & 2 – Cajons



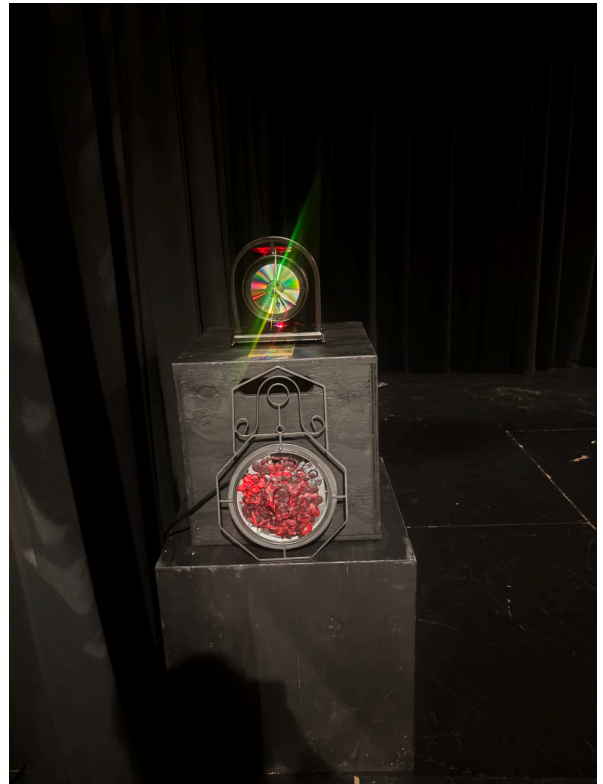
3 & 4 – Steel Sheet



5 – Red Bucket



6 – Wax Clock



Images of Objects

7 – Time Bowl



8 – Copper Sheet



Sculpture Element 2

No Sound

9 – Floor Mirror



Sculpture Element 1

No Sound

