

PRODUCT DESIGN

PORTFOLIO

BY MATTEO FARISELLI

D-FAULT.



D-FAULT.

AMBIENCE SYNTH.



D-FAULT is a wearable synthetiser that **translate** in real time **environmental** parameters in **audio** signals. This project was born as graduation thesis and aims to explore the relationship between environment and sonic perception, employing the interaction between users and their surroundings as a medium.

Utilizing four different **sensors** - stereocamera, light sensor, temperature sensor and environmental microphones - D-FAULT

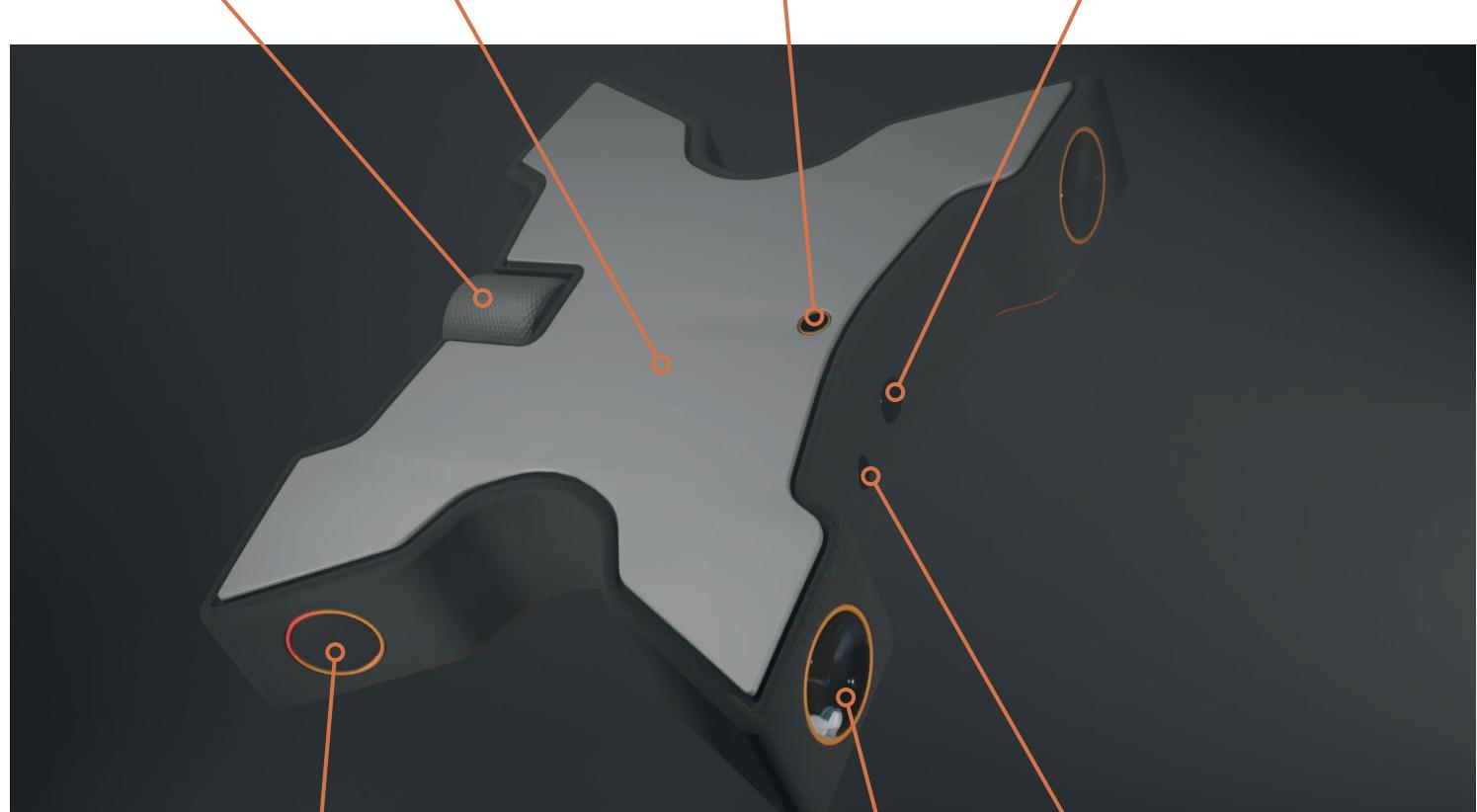
The **input** data and **output** audio relation is the following: stereocamera (spatial depth and movement) = reverb and sound spatialization; light sensor = brightness and sound timbre; temperature sensor = sound modulation; environmental microphones = sound texture, add more or less sound elements.

PRESET SELECTOR

LIGHT SENSOR

LIDAR SENSORS

TOUCH-SENSITIVE SURFACE



MICROPHONE {DX AND SX SIDE}

STEREOCAMERA



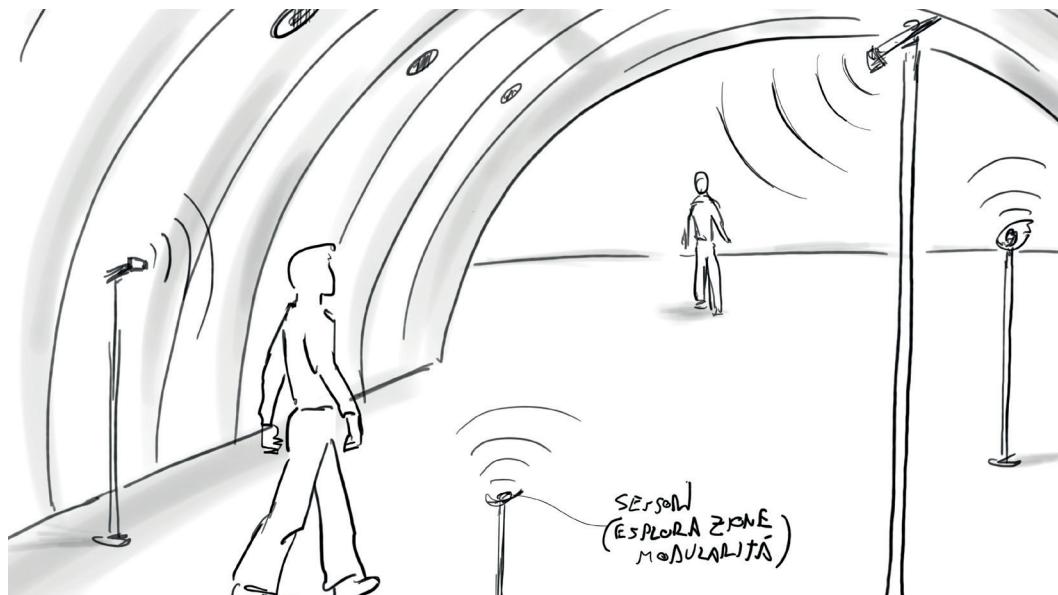
USING SCENARIOS



Music composition and sound design

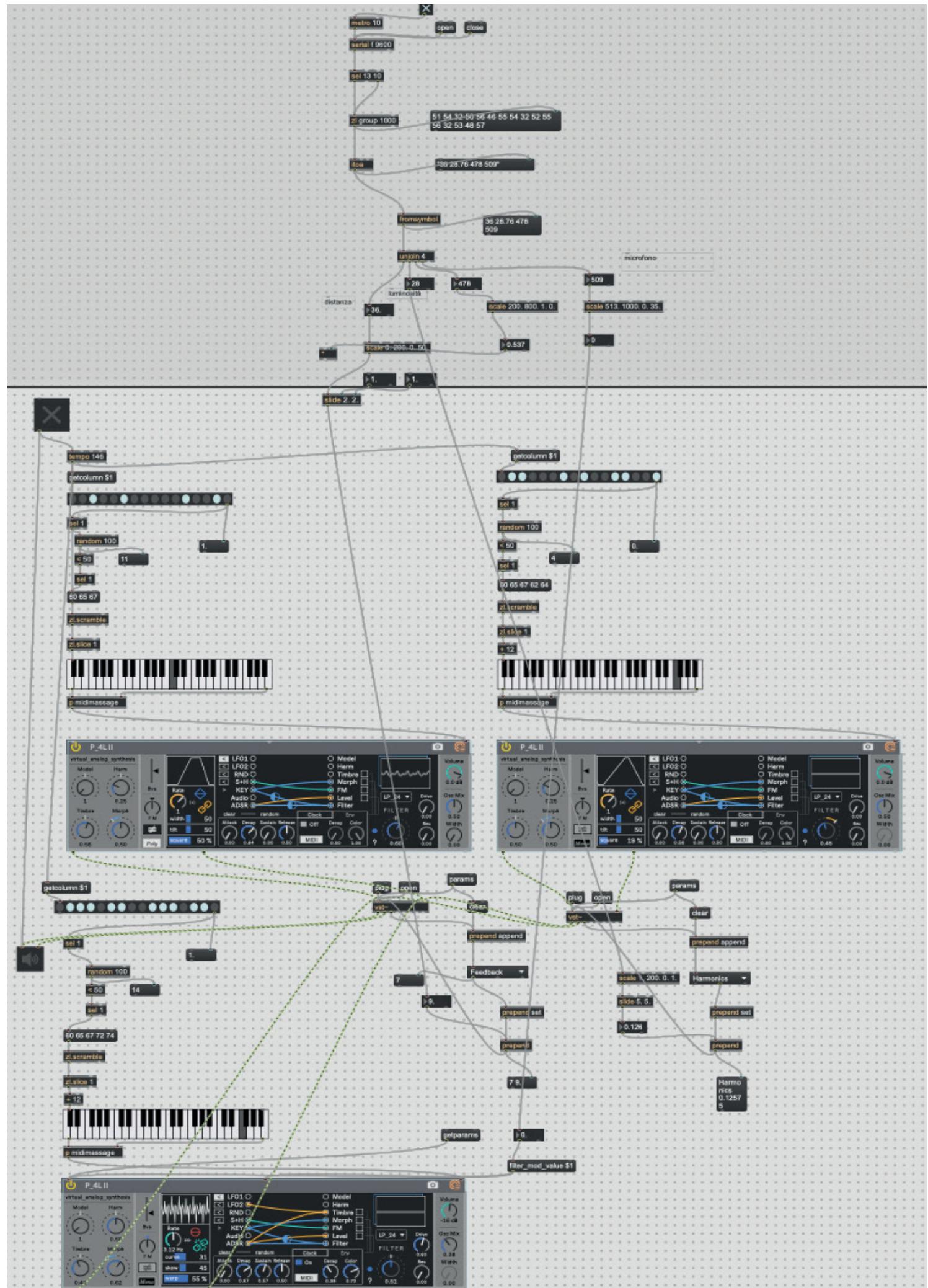


Live performance and musical expression

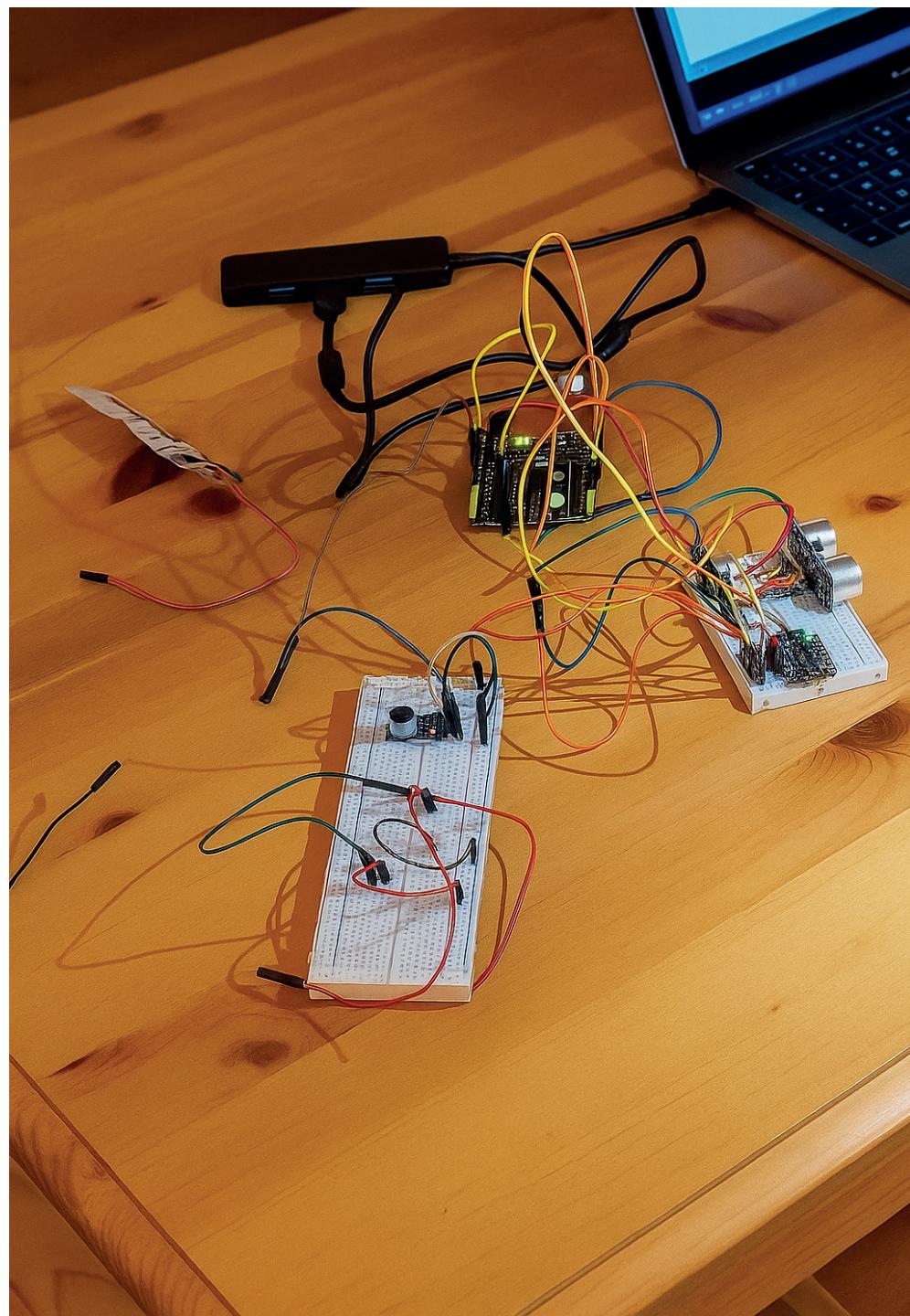


Interactive installation

TRANSLATING PATCH (MAX/MSP)



PROTOTYPE DEVELOPMENT.

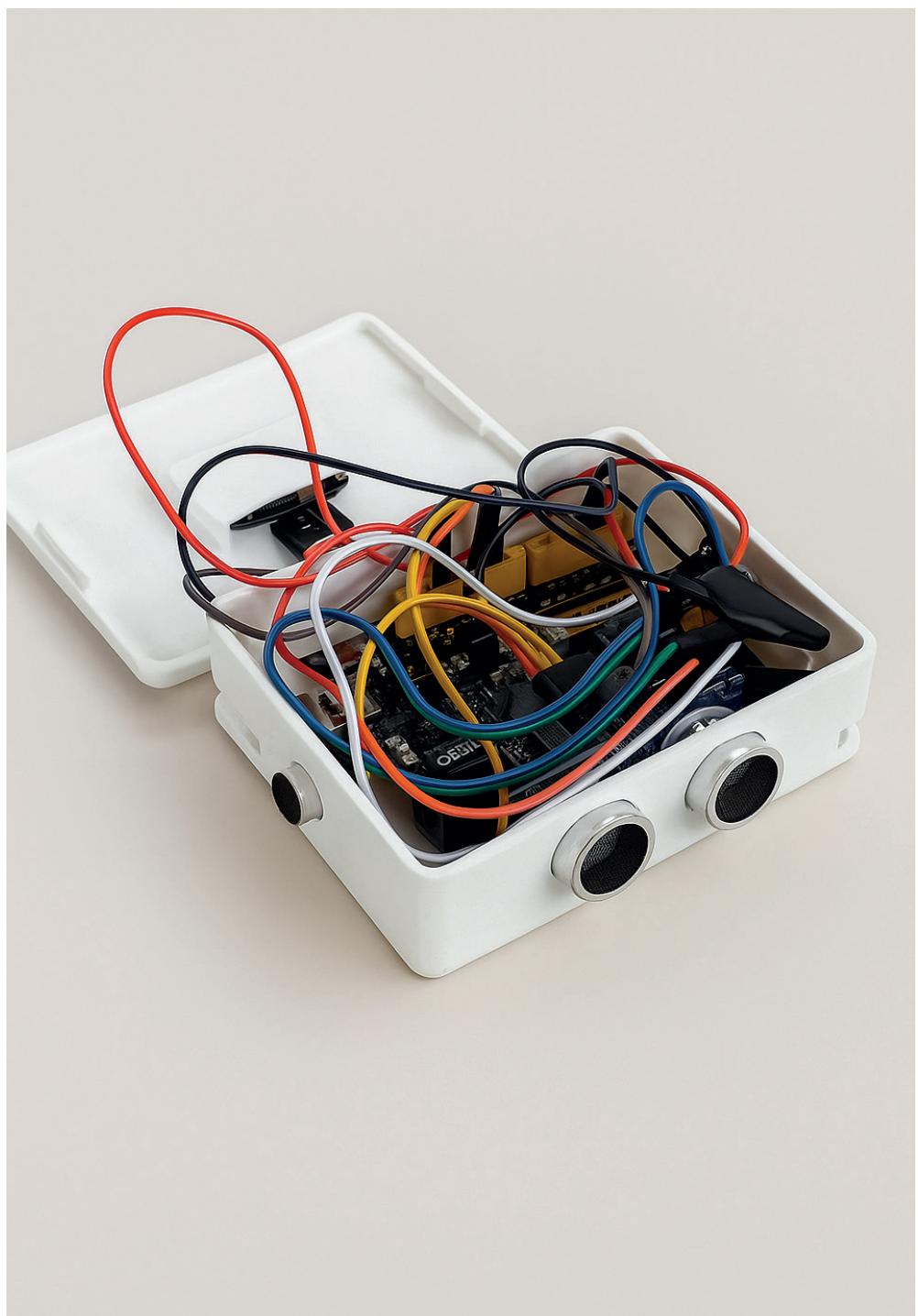


Coding and testing:

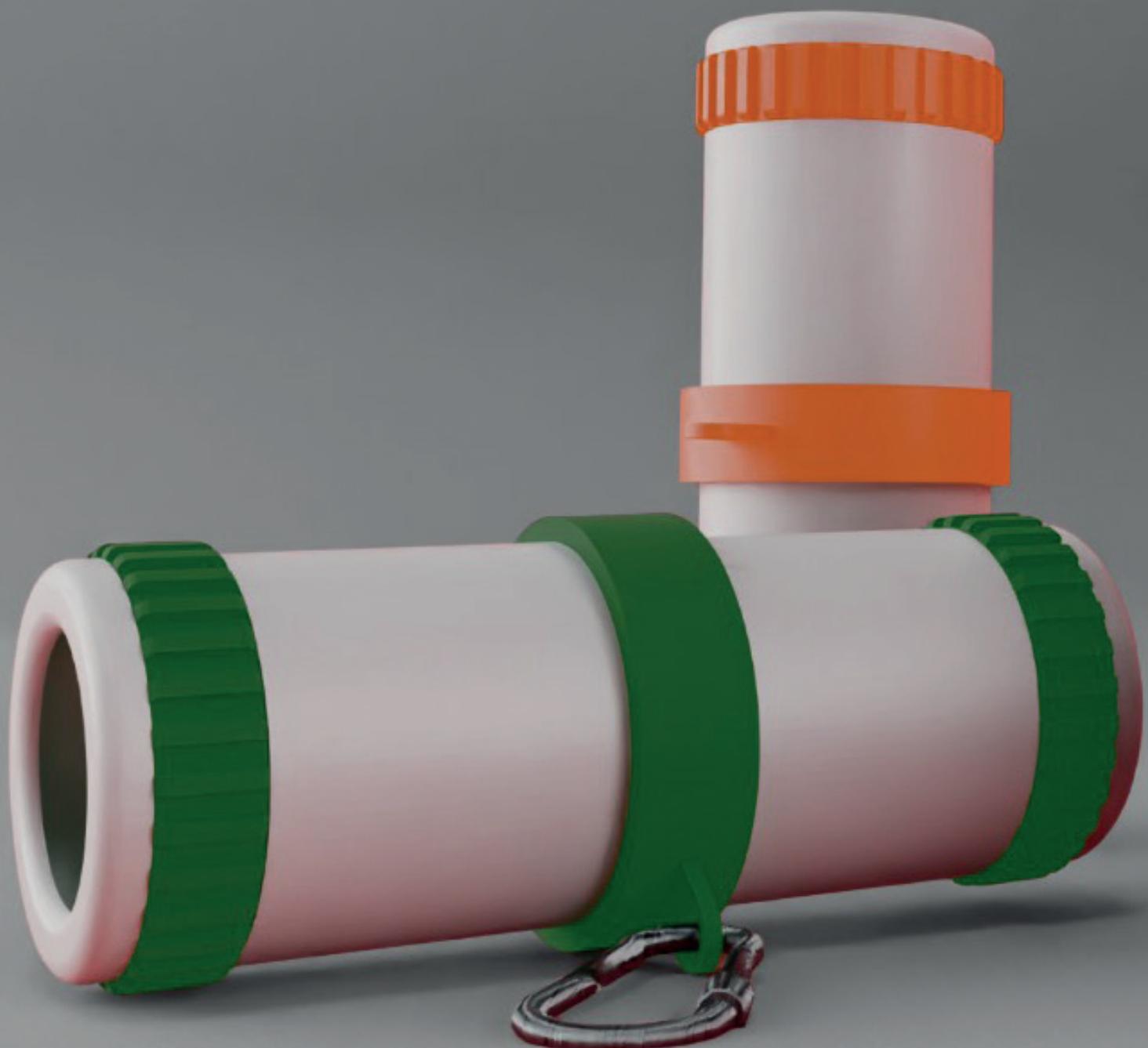
Development of custom code
and transmitting sensors data

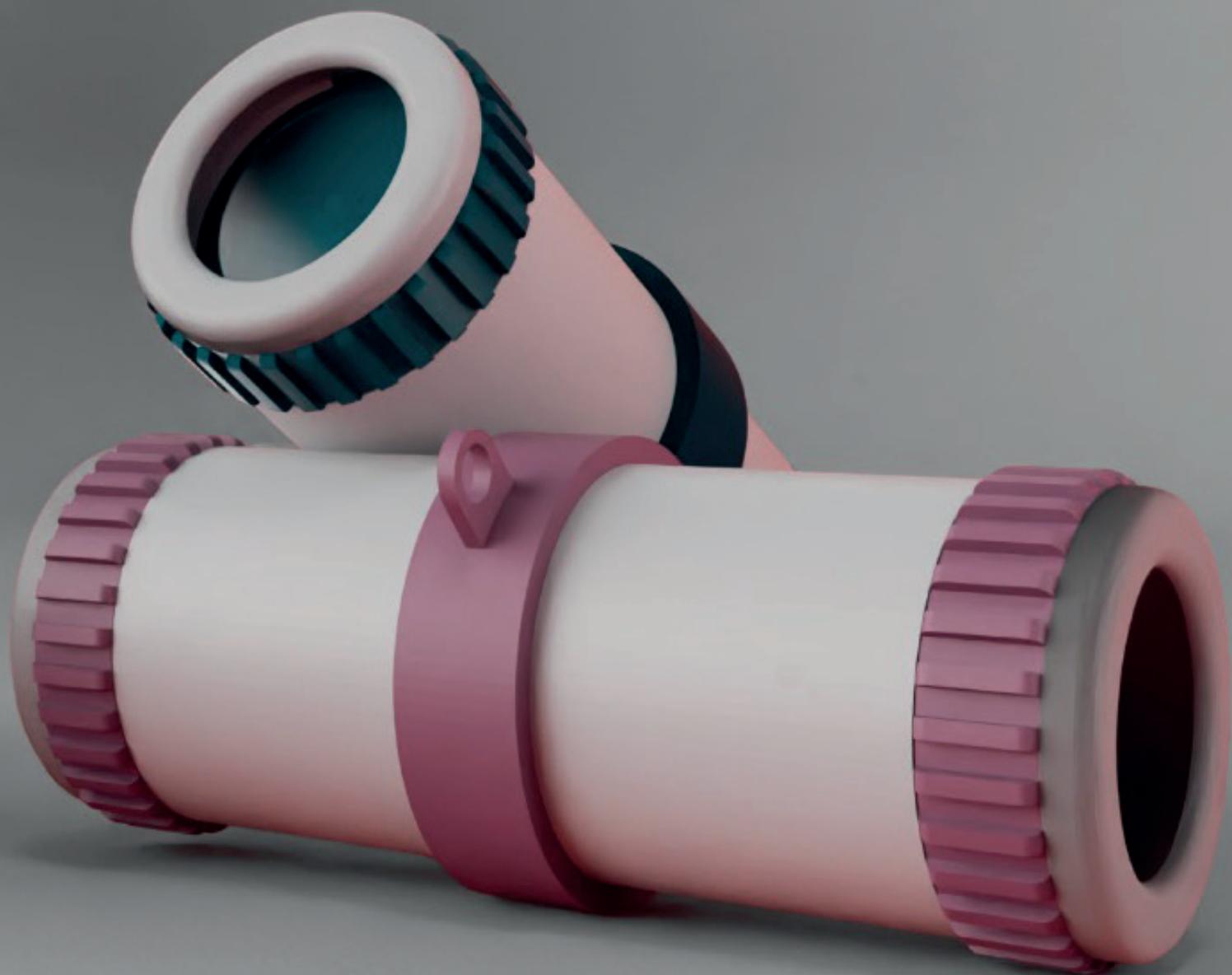
Creating a functional prototype:

After testing the functionality, a functional and demonstrative prototype was built by 3D printing a custom enclosure.



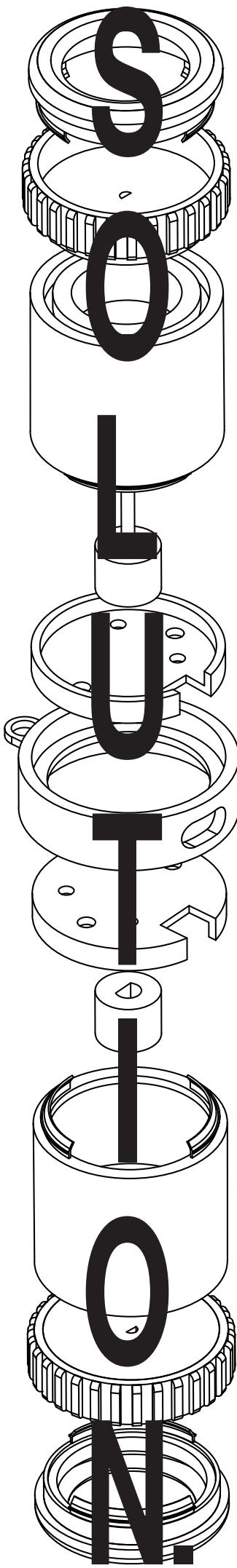
LYBRA.





MAVERIX. BIOMEDICAL
PRIZE. WINNER.

AGAINST
DEASISE.

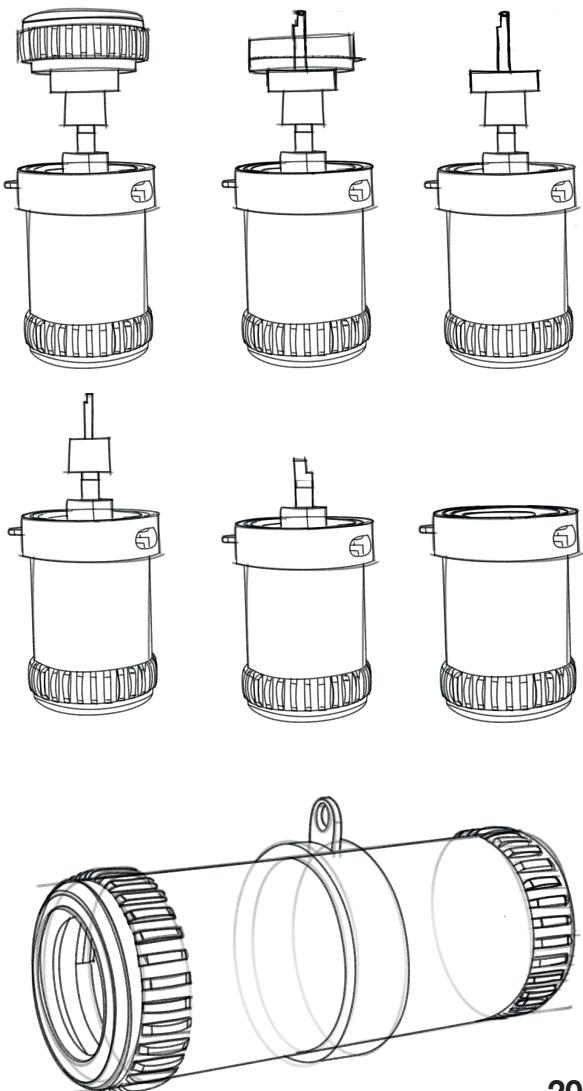


LYBRA is a device designed to temporarily **defuse panic attacks**. People suffering from this condition can carry the object in their pocket.

This project focuses on three key aspects: **portability**, **neurofeedback**, and **active** Once a **heartbeat irregularity** is detected, **two** pulsations (**vibrations**) are randomly triggered. These vibrations must be rephased by the user through two side rings/encoders, adjusting both frequency and intensity.

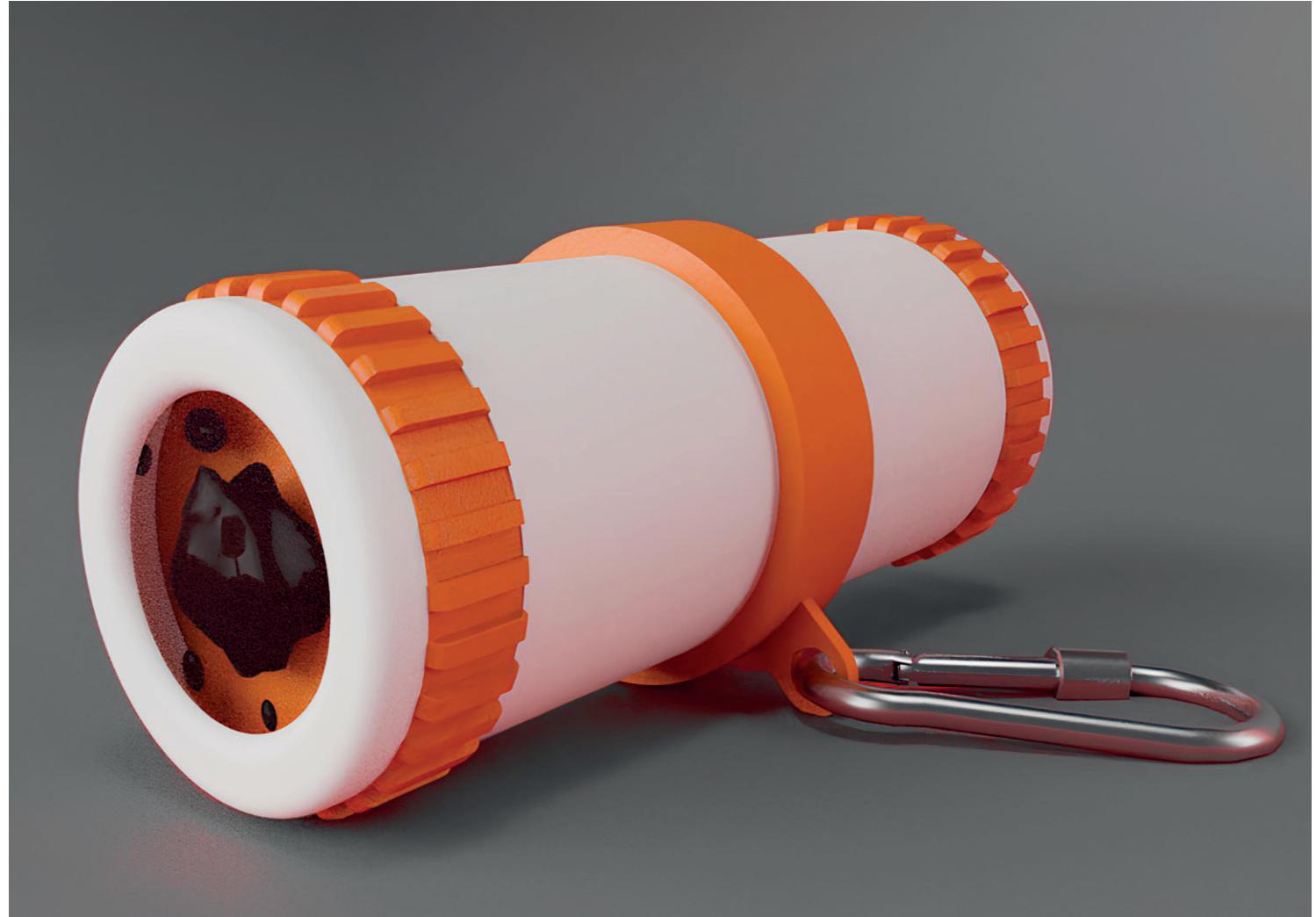
When the vibrations are **synchronized**, the **device** will **turn off**.

This process **shifts** the user's **focus** from

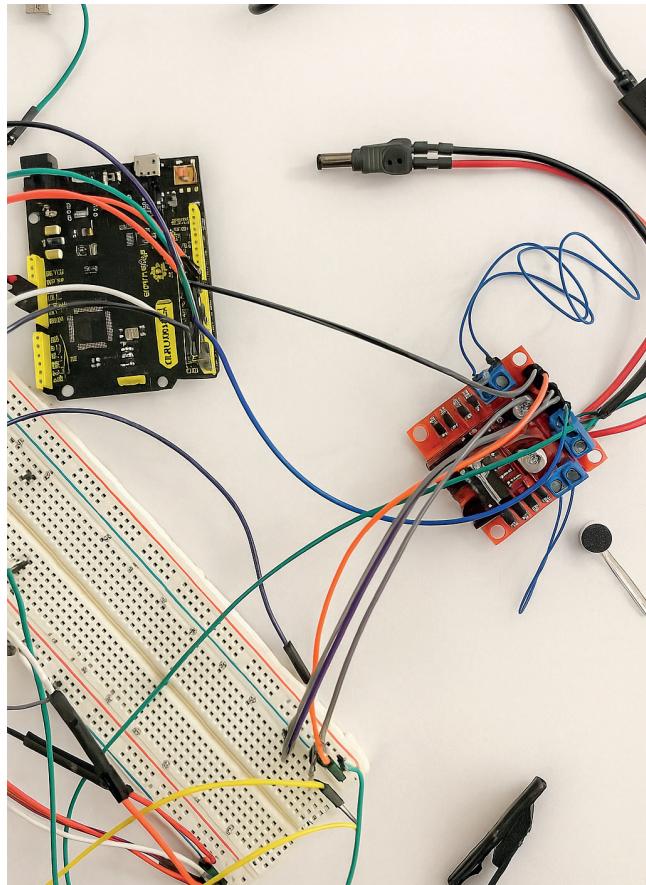




MAVERX BIQ PRIZE MEDICAL WINNER.



PROTOTYPE DEVELOPMENT.

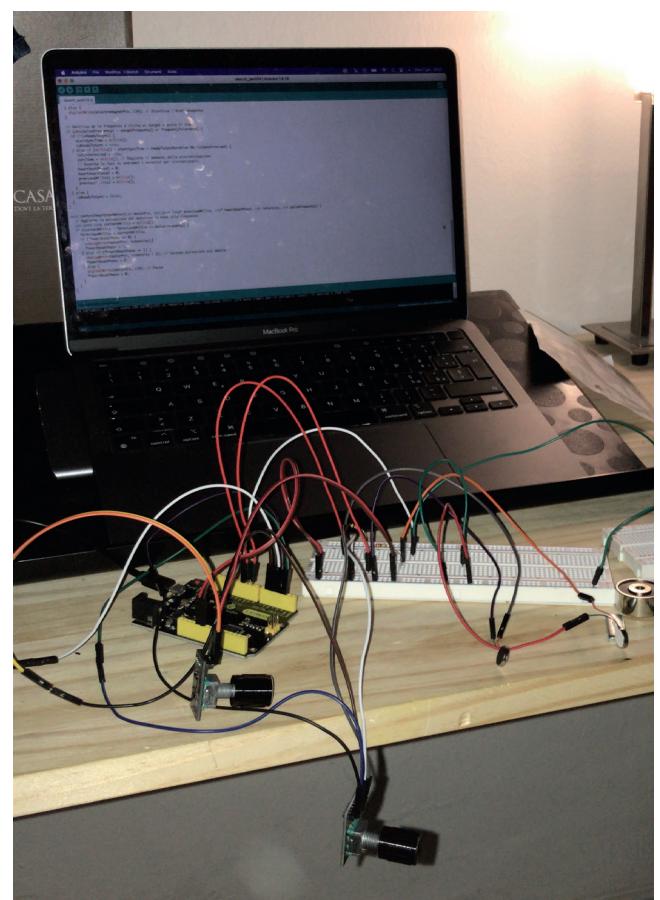


Component selection:

Identification of electronic components based on functional requirements.

Coding and testing:

Development of custom code and initial testing to validate system behavior and performance.





Final prototyping

Assembly and 3D printing of the final prototype, integrating all components into a functional model.

LIGHT. CONCEPT.

CONCEPT.

LIGHT DESIGN.



PORTABLE.

12/10/24.

This concept was born from the idea of having a **table lamp** that, brought its own components, would be able to reproduce an **indirect light effect**, utilizing only one 3w led.

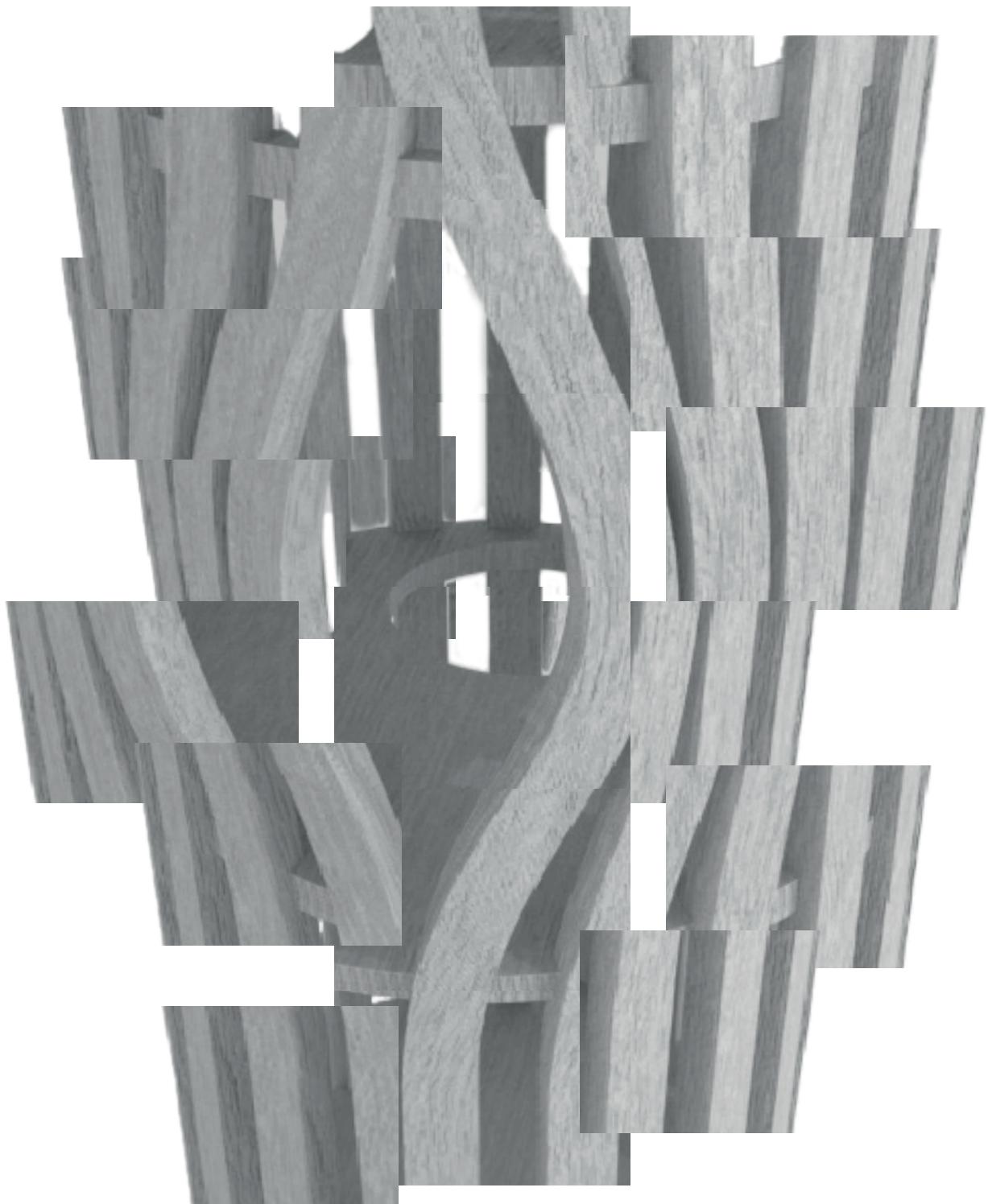




The lamp has been first modeled in CAD, paying attention to components tollerance and joints. After that, has been **3D printed** in **resin** and handmade refined. Final, the electric circuit and cable management was built.

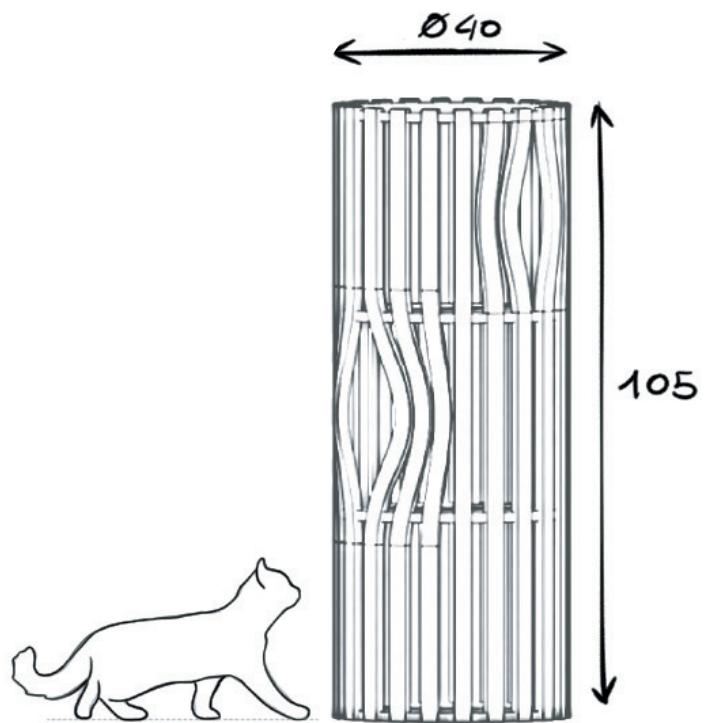
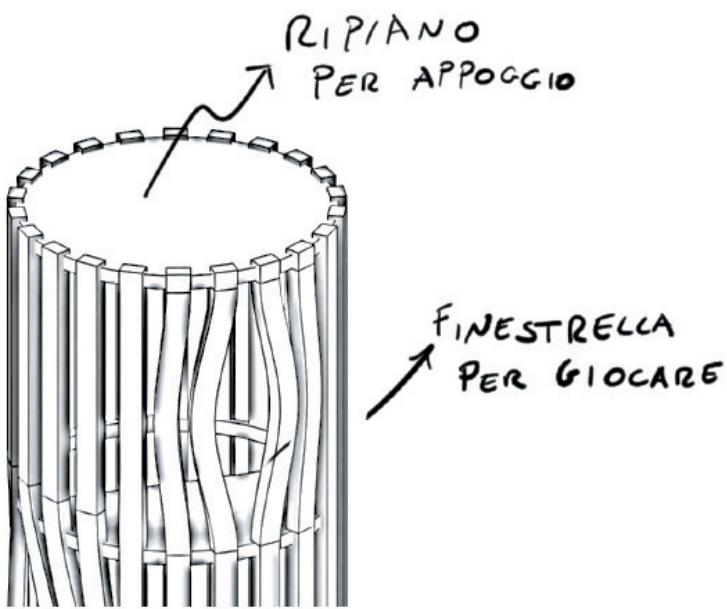
LOGHUT.





C O N C E P T.

The **structure** is supported by **wooden slats**, allowing each level to create a **shaded area** – a spot from which the outside can be observed (from the cat's perspective) or the inside (from the human's point of view).



LUNA.



LUNA.

RECYCLED CARDBOARD.

TAVOLINO.

24/06/22.

LUNA was born from the experimentation and raw manipulation of cardboard.

Through different processes – shredding, molding, and pressing – the production method was defined.

The idea is to **shred cardboard** sheets, mix them with **rice starch** (used as a natural binder), and place the mixture into a mold.

In our case, a vase was used as the mold, and the material was then **compressed** using two clamps to compact it.



ID EA.



The final step is **drying**, which solidifies the form and reveals the final result.

This process resulted in a small table entirely



3D MODELING. RENDERING.

RENDER.



R
RE

FEND



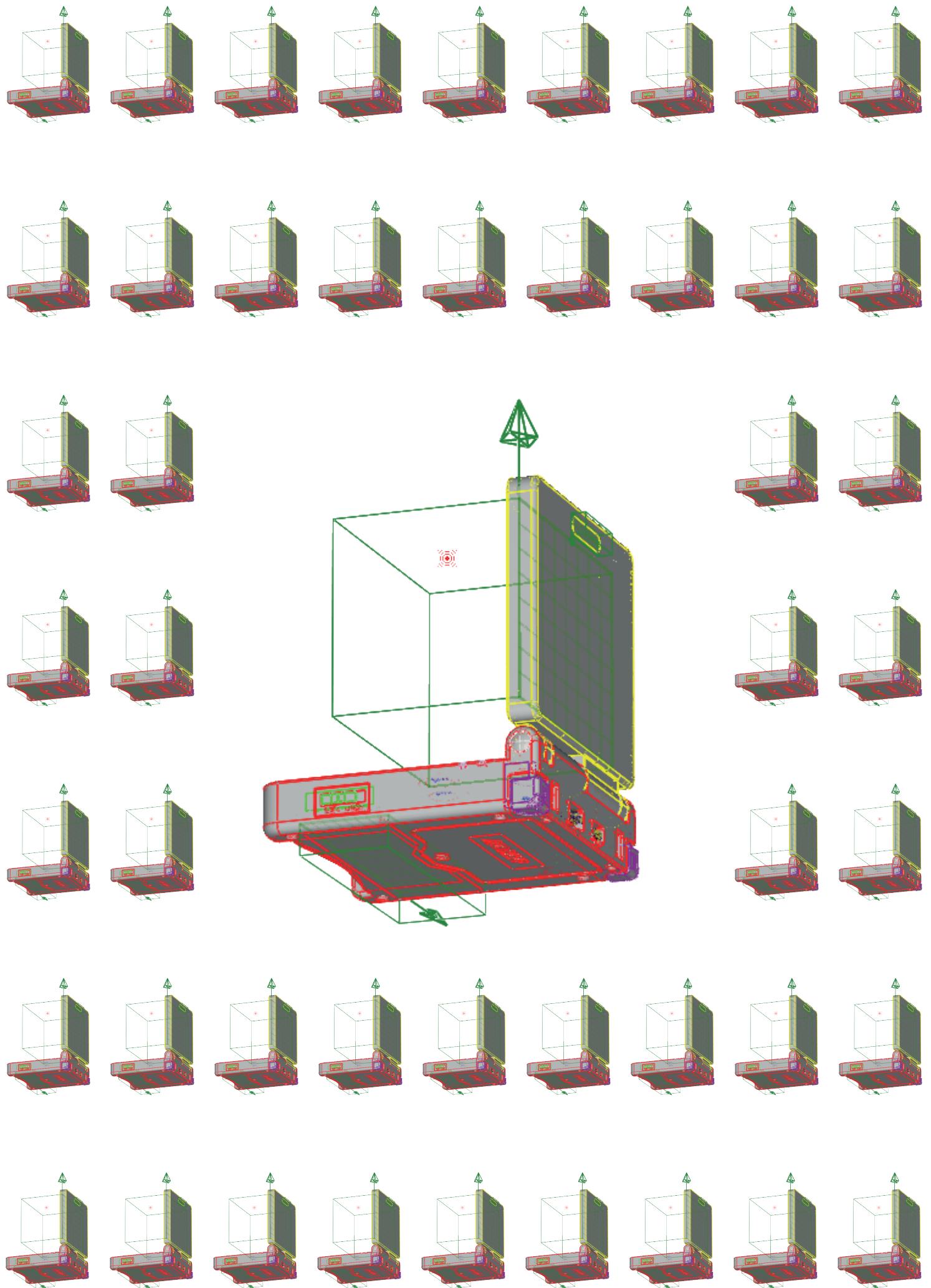
FENDER.

BEENBEB&EENBEB.

ENDCASTER. ENDCASTER.

ER. RENDER.

TELE RENDER.



GAMEBOY. ADVANCE. SP.

MODELING.

GAME BOY ADVANCE

