PROTECT

Comfortable.
Careful.
Clever.

PROTECT

The Process

SECTION 1 *Product Story*

SECTION 2 *Key Features*

SECTION 3 *Design Process*

SECTION 4 *Research*

SECTION 5 *Ideation*

SECTION 6 *Prototype*

HOW CAN WE LOWER THE EFFECTS AND SEVERITY OF TINNITUS?

"**45,000 people** in Ireland *suffer* from **Tinnitus**."

- Irish Tinnitus Association

PROTECT is an innovative solution to help users keep their hearing protected in any situation. The unique design notifies you exactly when you need to be protected at music events and monitors the event while the user in it. This allows them to keep their focus on the event and let us worry about their protection.

WITH OUR SIMPLE TO USE APP, WE LET YOU KNOW EXACTLY WHEN TO POP IN YOUR HEARING PROTECTION.

Our app will warn you when the venue is ***too loud*** to make sure that you have the ***clearest*** and ***safest*** listening experience **possible.**

With our ergonomic grip, ***PROTECT*** is simple to pop in and out, as and when ***you need it***.

• Key Features

The smart silicon, ***moulds*** and ***seals*** to the **user's ear,** giving them a ***water tight*** seal and up to **22dB** of sound reudction

The case is designed to attach seamlessly to the user's key chain while also giving them the maximum comfort and keeping their hearing protection clean.

• Key Features

PROTECT APP

Sign in from any-where to get your information

Select calendar or dB Counter

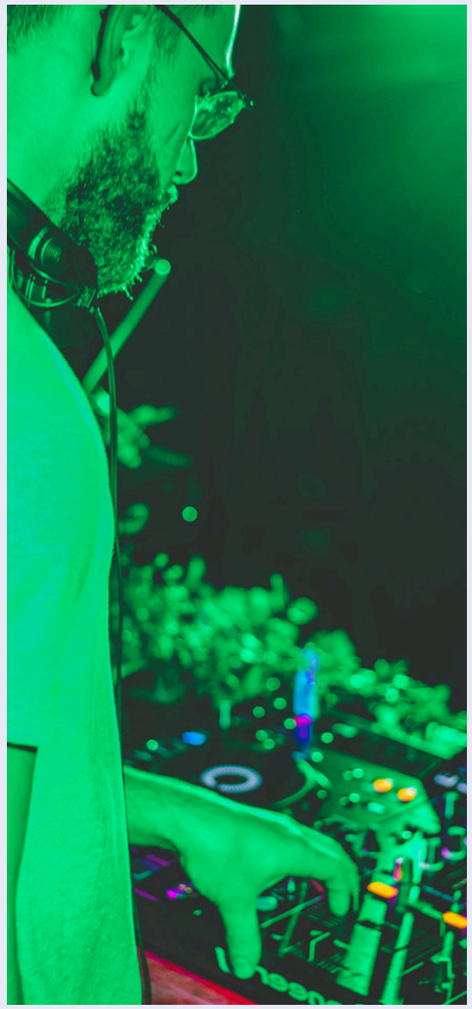
Start/stop dB count as and when you need

Select the dates you have events

Book in the time and get reminded the morning of the event

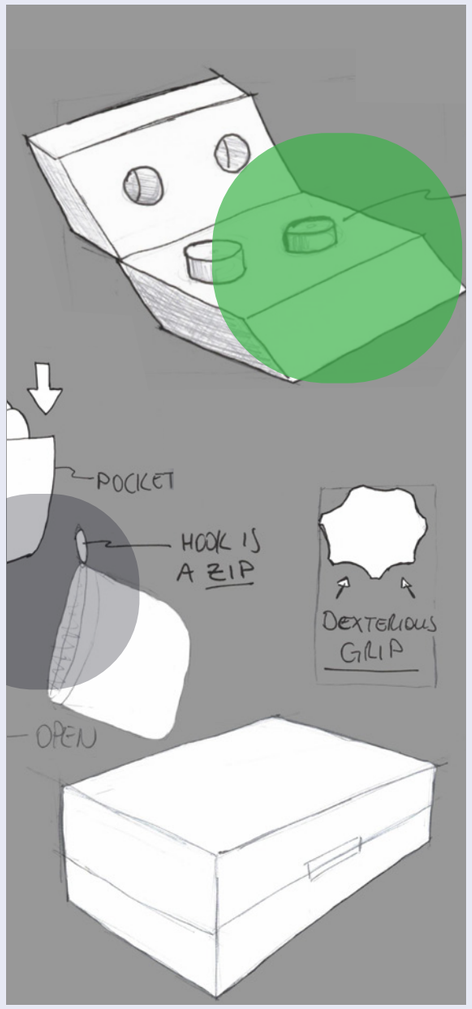
• The Design Process

Empathise



Define

Ideate



Prototype

In order to solve real problems with real solutions I started this project by attempting to understand and relate to the affected user. I needed to define what the user's issues were in order to create a real product that solves a genuine need that is unsolved by current solutions.

"Get closer than ever to your customers. So close that you tell them what they need before they re-alise it themselves."

- Aaron Walters

What is Tinnitus?

Tinnitus is the ***perception*** of noise or ringing in the ears.

It is **not** a condition itself but a ***symptom*** of underlying conditions including **hearing damage**.

It is found to be a particular problem among music enthusiasts, musicians, performers and people who go out to events on a regular basis.

By using hearing protection users will not only have a more comfortable day-to-day experience but they will also preserve their hearing much longer, into their later years.

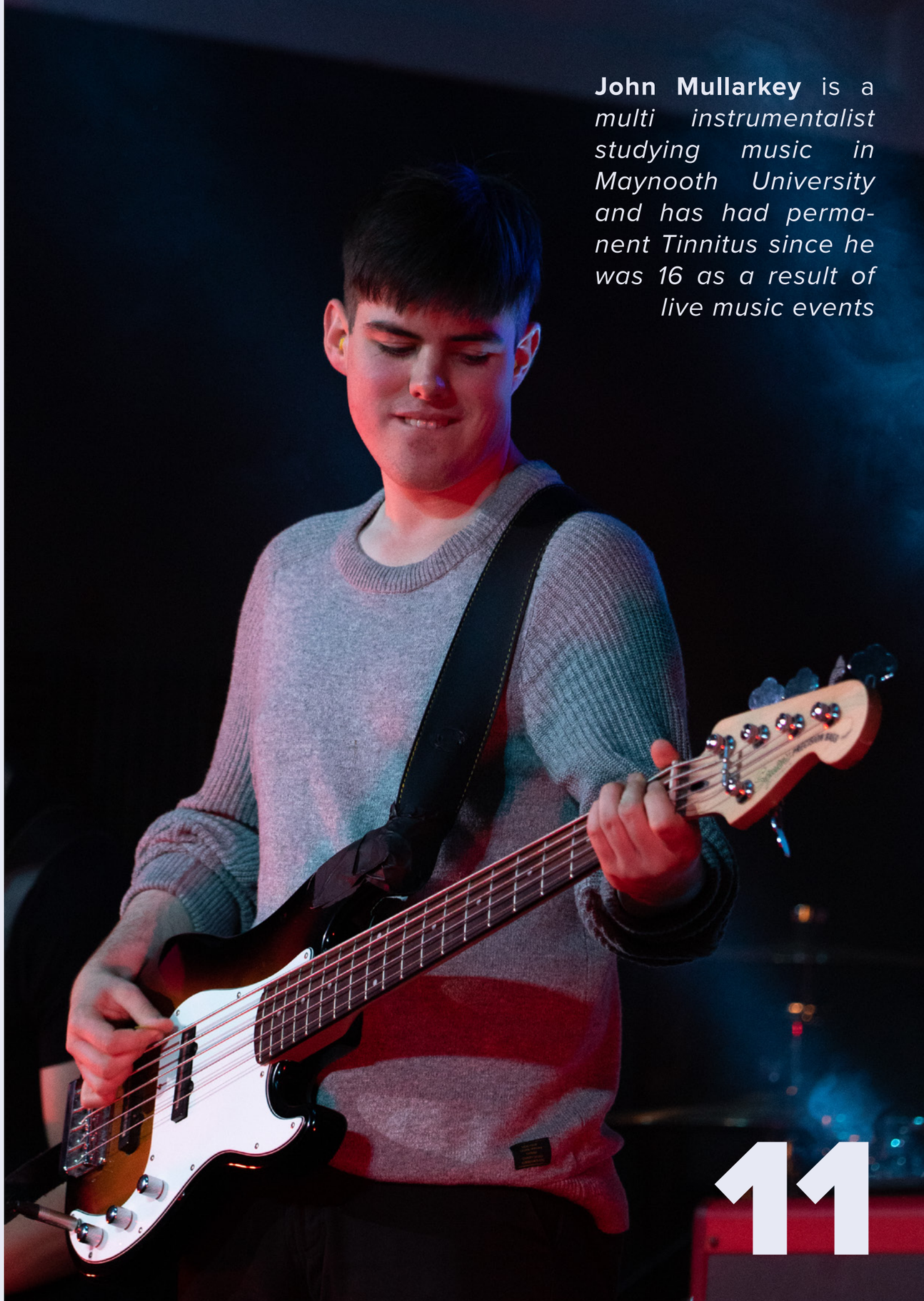
User Investigation

Key Findings

The user investigation that was conducted to begin this project included field observations, online surveys in music forums and in-depth interviews with musicians and DJ's.

What I discovered through this process was that most people have experienced some form of tinnitus in their life due to music events. The user also knows that they should wear hearing protection to prevent tinnitus but usually forget to bring their protection with them to the event.

My findings showed that people are interested in a product that would be reusable, of high quality and reduce enough sound to keep the venue safe while not degrading the sound quality.



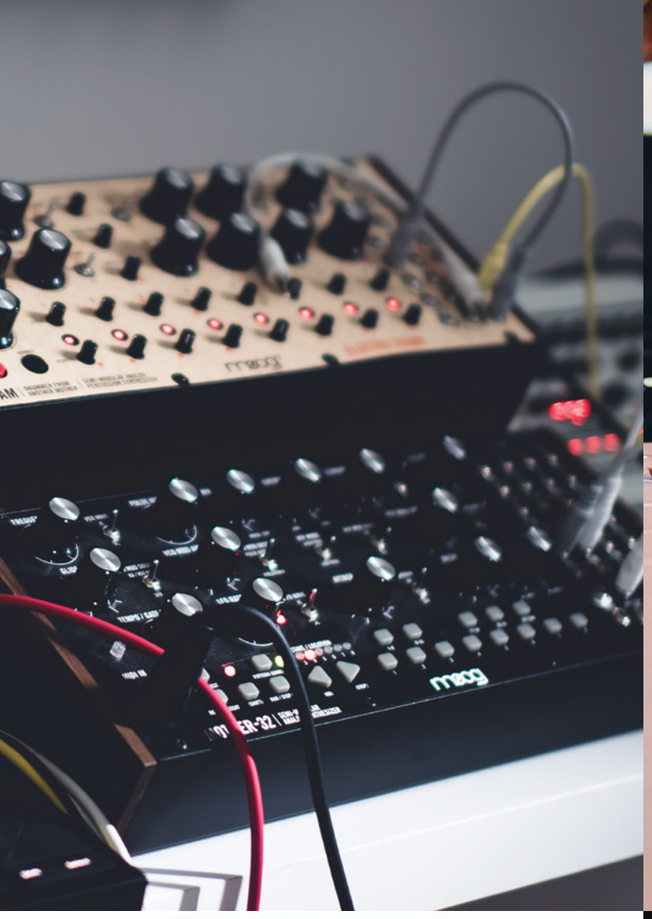
John Mullarkey is a *multi instrumentalist studying music in Maynooth University and has had permanent Tinnitus since he was 16 as a result of live music events*

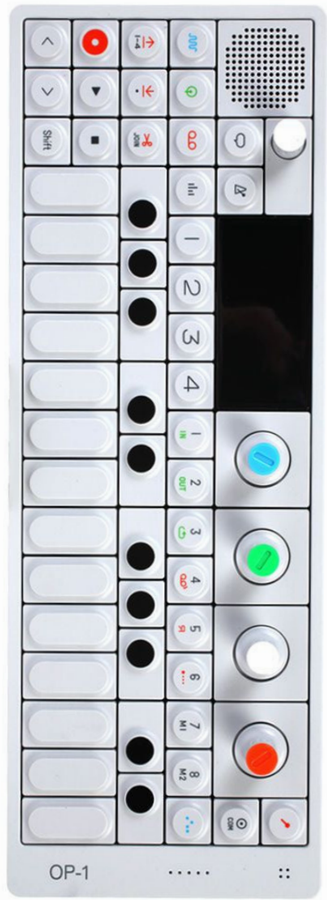
• Market Research

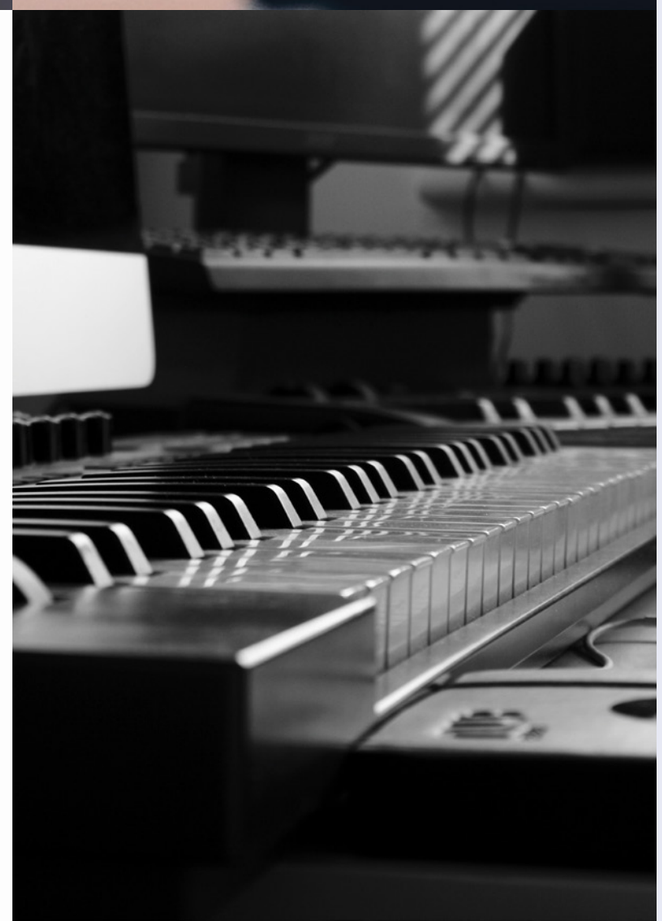
- As of 2008, there were a total of 328 night clubs in across Ireland and 226 late bars.

- 3 of the largest music festivals in Ireland, Longitude, Electric Picnic and Forbidden Fruit see a combined total of 115,000 people come through their gates. With many more operating throughout the festival season.

- About 1 in 10 people in the UK suffer from tinnitus.





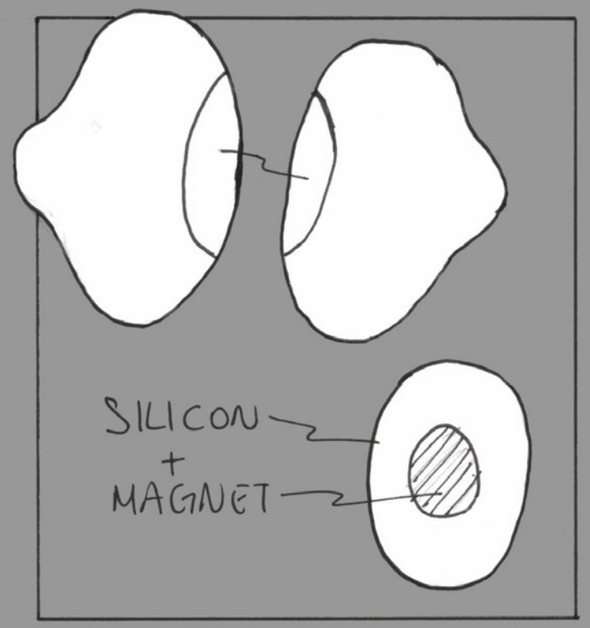


• Trends + Drivers

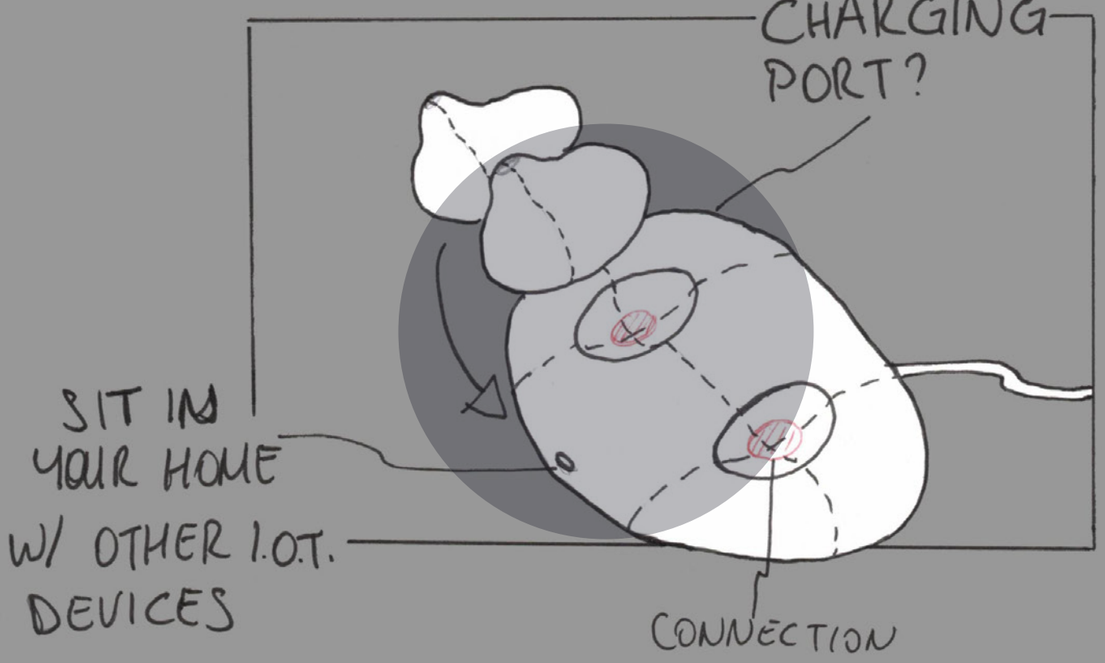
- To start off the design phase of the project, I had to look into what was at the forefront of musician's minds when they thought of innovative products in the sector.

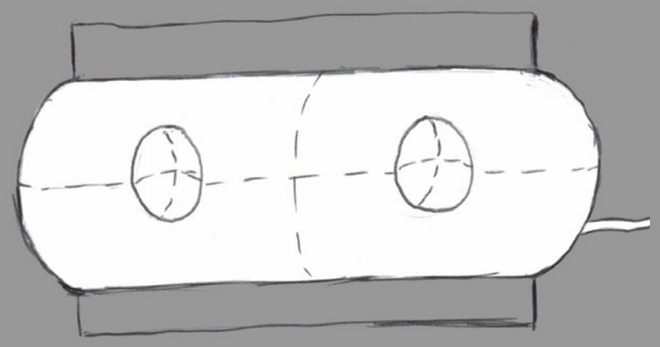
- It was found that users get excited about strong, confident design and products that have a large array of functions packed into their ecosystem.

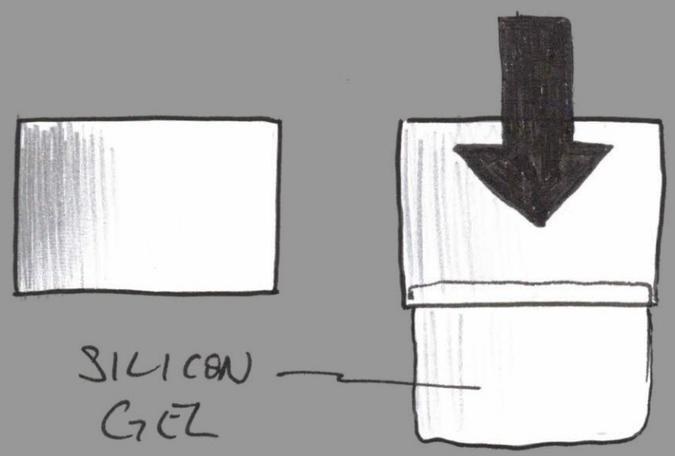
• Ideation

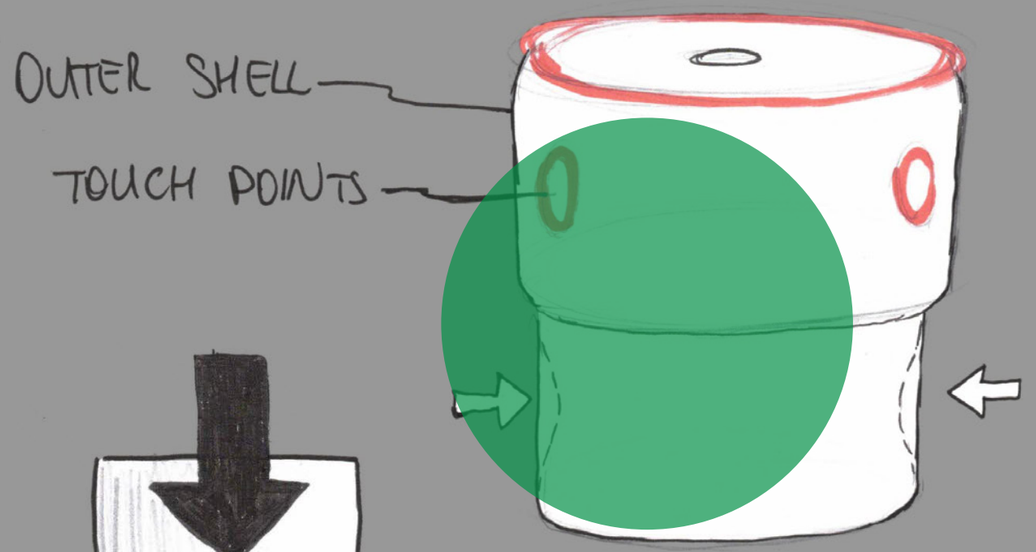

SILICON
+
MAGNET

METAL CHAIN TO
HOLD TOGETHER

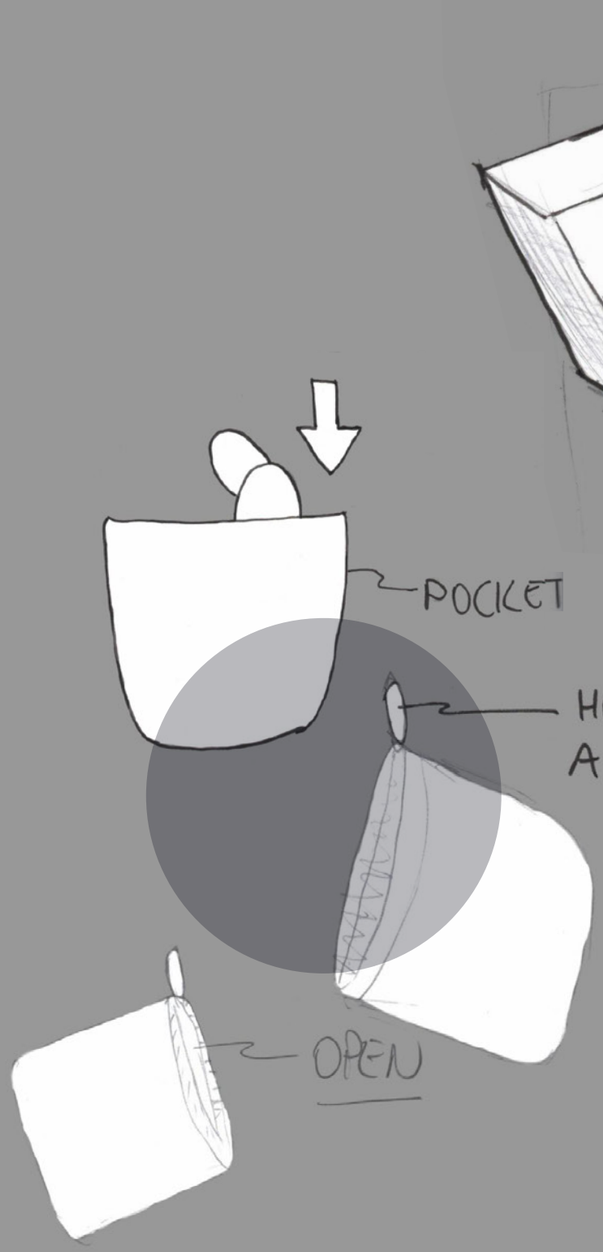

CHARGING
PORT?
SIT IN
YOUR HOME
W/ OTHER I.O.T.
DEVICES
CONNECTION

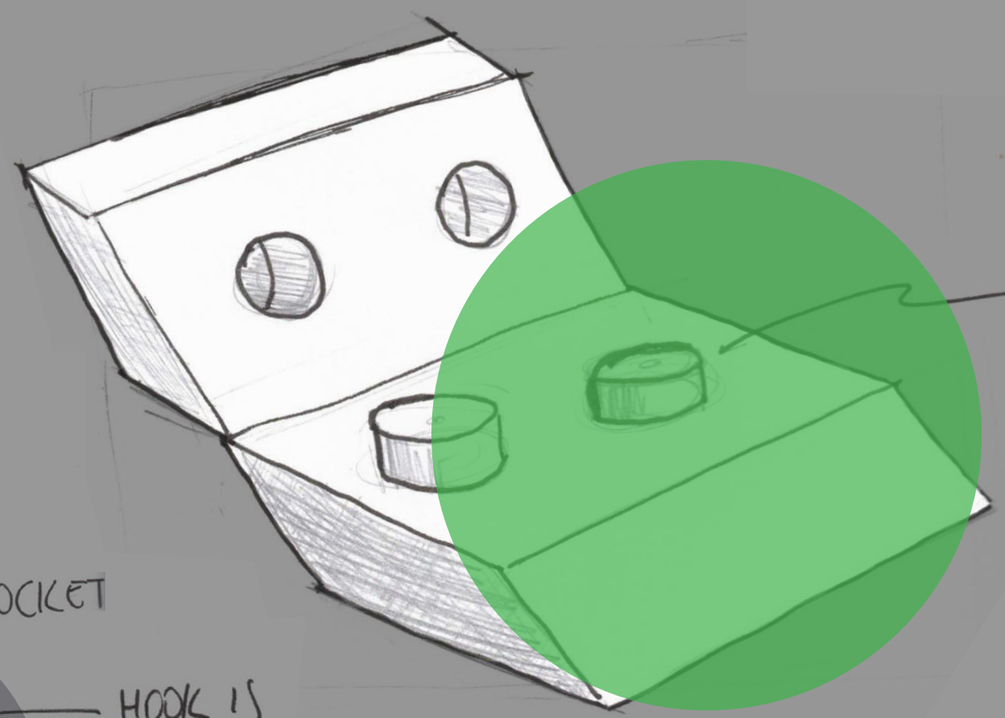


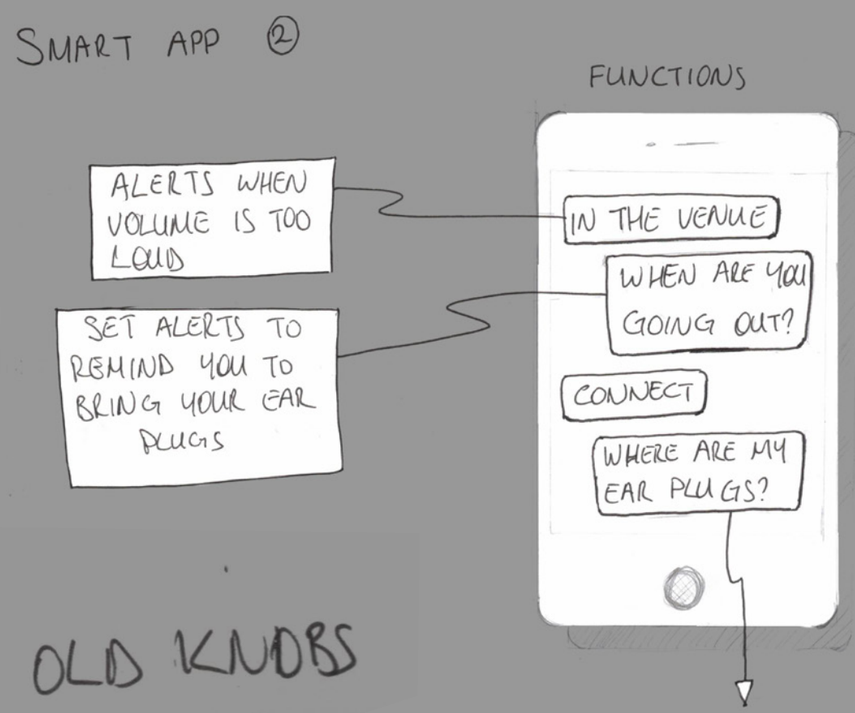

SILICON
GEL

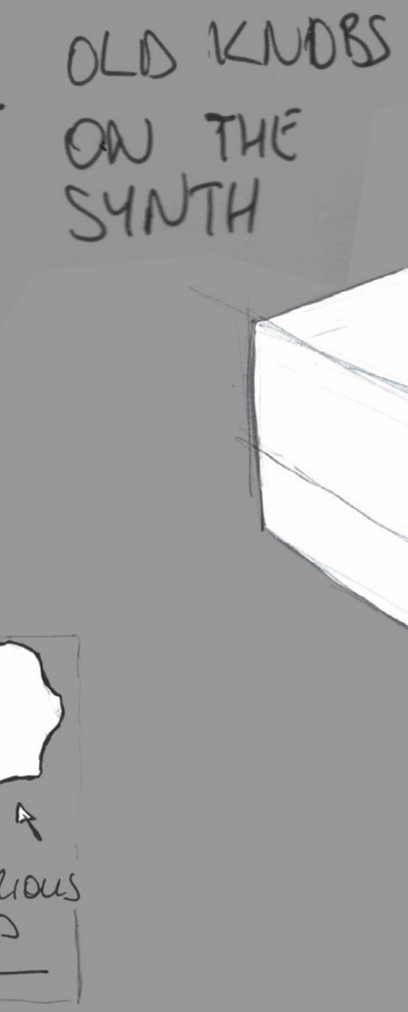

OUTER SHELL
TOUCH POINTS

• Ideation

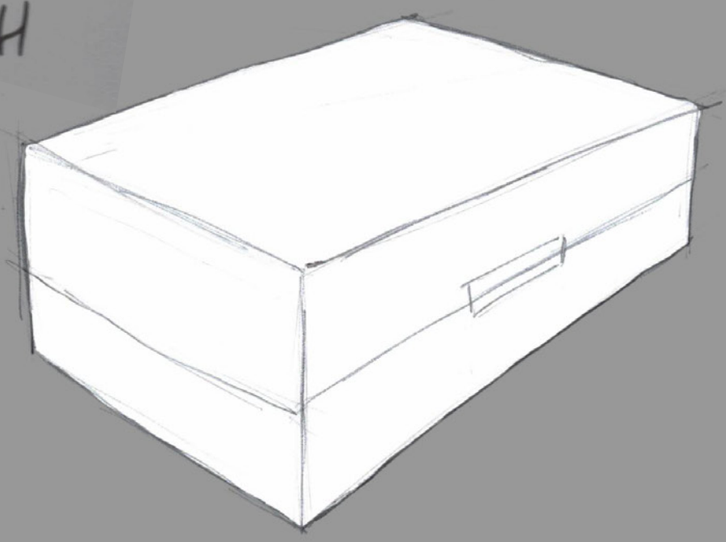

POCKET
HOOK IS A ZIP
OPEN



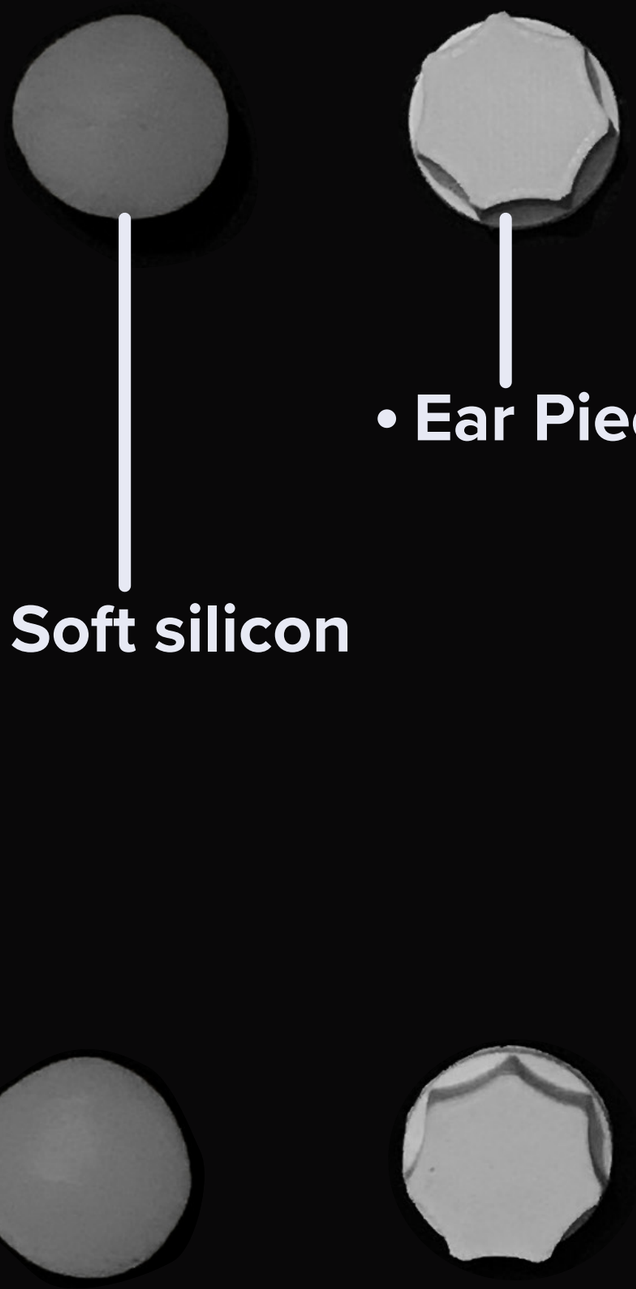

SMART APP ②
FUNCTIONS
ALERTS WHEN VOLUME IS TOO LOUD
SET ALERTS TO REMIND YOU TO BRING YOUR EAR PLUGS
IN THE VENUE
WHEN ARE YOU GOING OUT?
CONNECT
WHERE ARE MY EAR PLUGS?


OLD KNOBS ON THE SYNTH

DEXTERIOUS GRIP



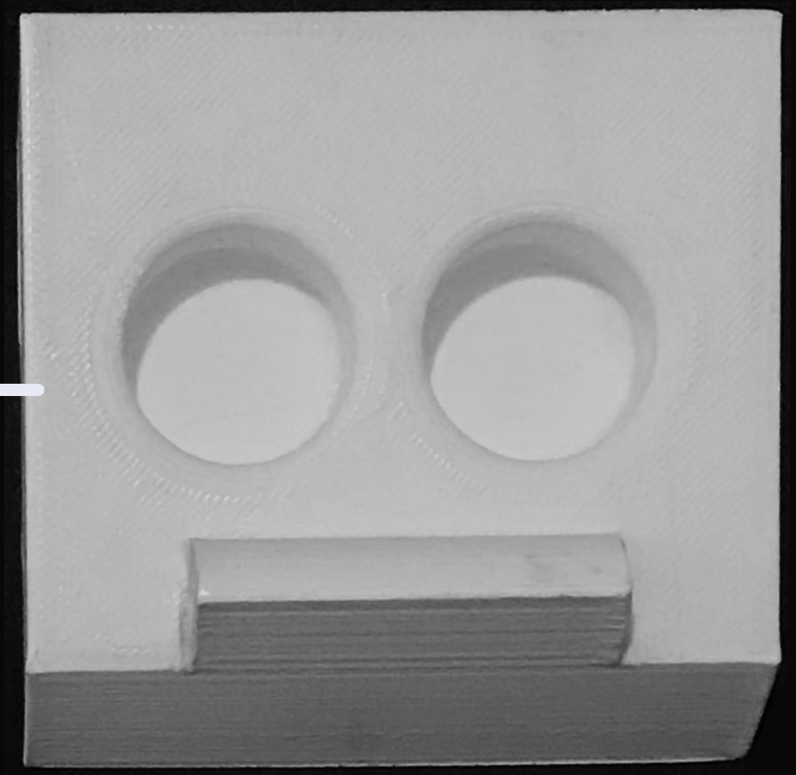
3D Printed Parts



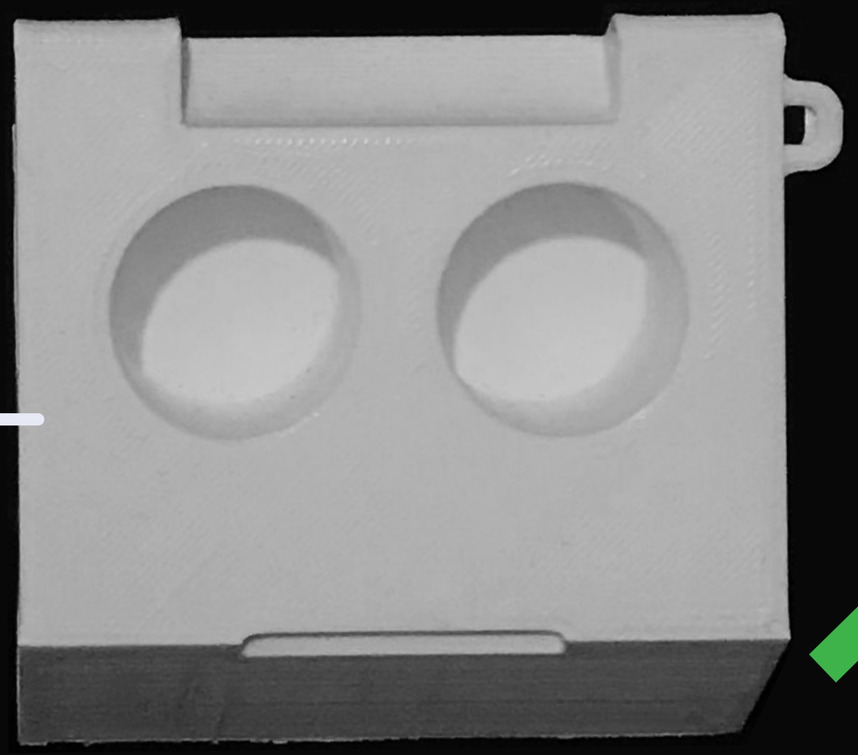
• Soft silicon

• Ear Piece Grip

• Case Top



• Case Bottom



PROTECT

OLD MOOG SYNTH STYLE

OLD KNOBS ON THE SYNTH

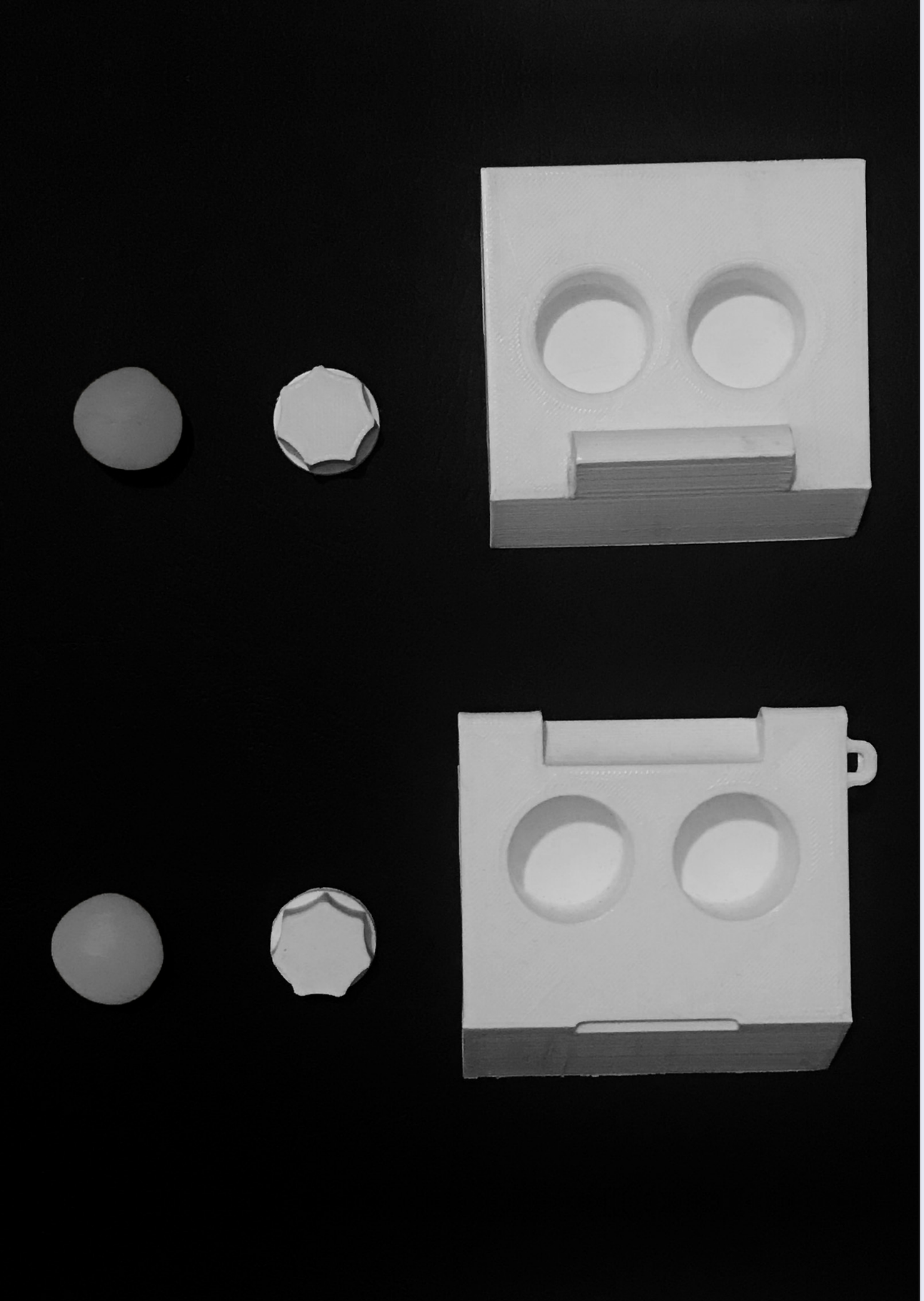
TACTILE BUTTONS

NICE ANGLES

BLACK PLASTIC + WOOD - NICE COMBINATION

DEXTERITY GRIP

STAINLESS STEEL?



• Prototyping + Material Selection

The finished prototype was creating by 3D printing CAD models as a replacement for moulding the design as it would be for mass production.

I sourced a special sound proofing silicon that moulds to the user's ear which gives the user a comfortable and clear sound.

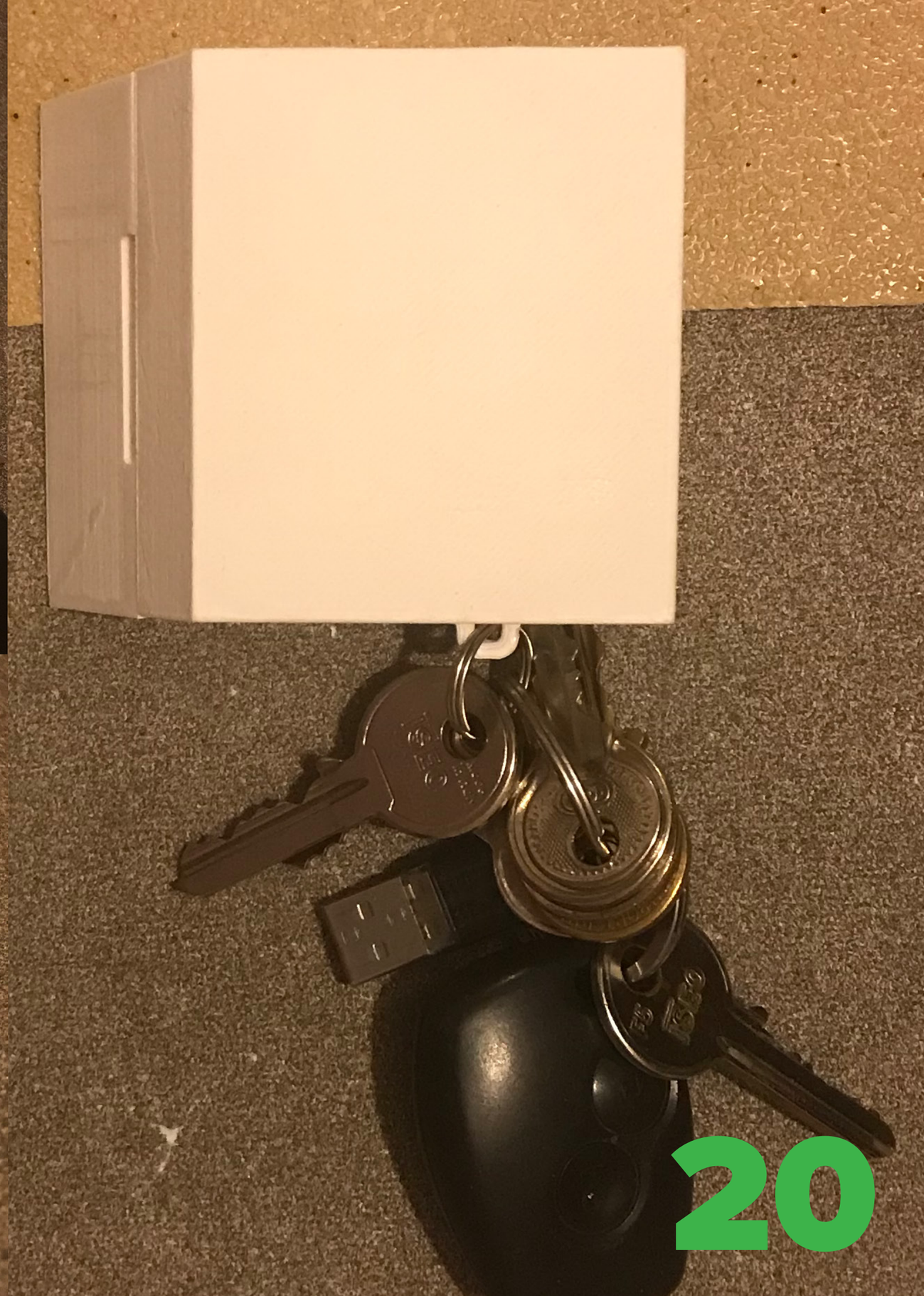
While certain concessions needed to be made, due to the government lock-down, I was not able to create the finish or colour I would have liked.

• User Testing

During the concept and testing phases, I brought the ideation to the user; musicians, DJ's, producers and event goers. This made sure that the user's needs and wants were always at the forefront of the design.

After several itterations, I decided to reduce the product's internal comlpexity and focus on creating a sister app that would lower the overall manufacturing costs while also reducing cost to the end user.

- Final Concept



Thanks for checking out ***PROTECT***

About Me

Hi, I'm Sam. Thanks for checking out my project, ***PROTECT***. I have had a fantastic experience learning from some brilliant designers over the past 4 years and I have learned to sculpt the knowledge I have gained into meaningful solutions for my users and customers.

During this course I have grown to love strategising and solving problems for users with a particular emphases on sound and graphic design. If you would like to check out more of my work you can see my contact info below.

Thanks,
Sam Clarke

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