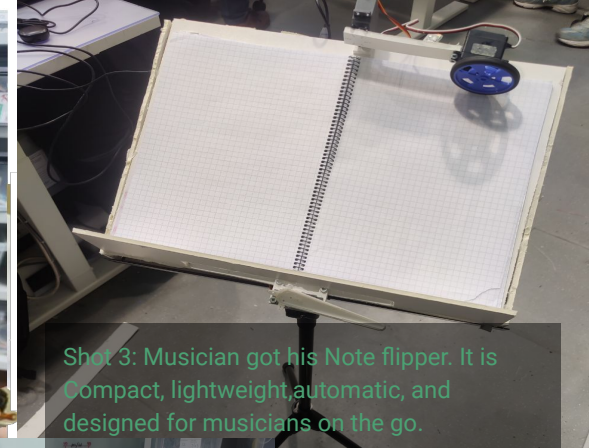




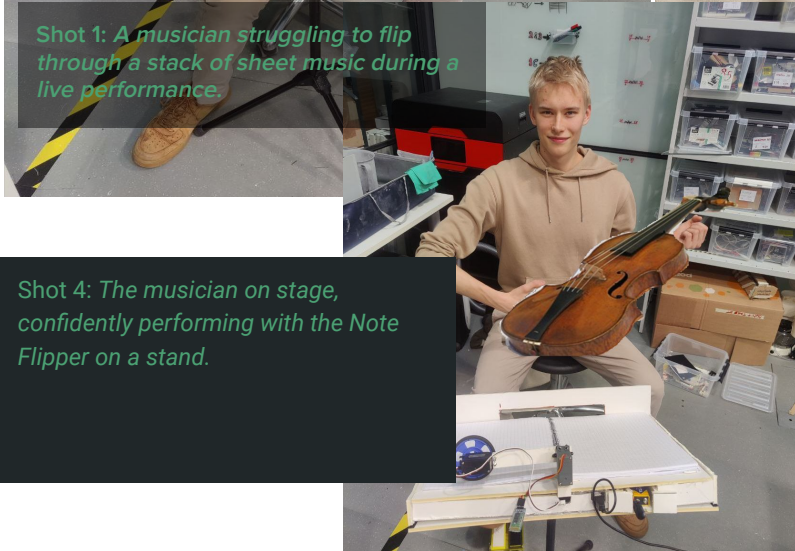
Shot 1: A musician struggling to flip through a stack of sheet music during a live performance.



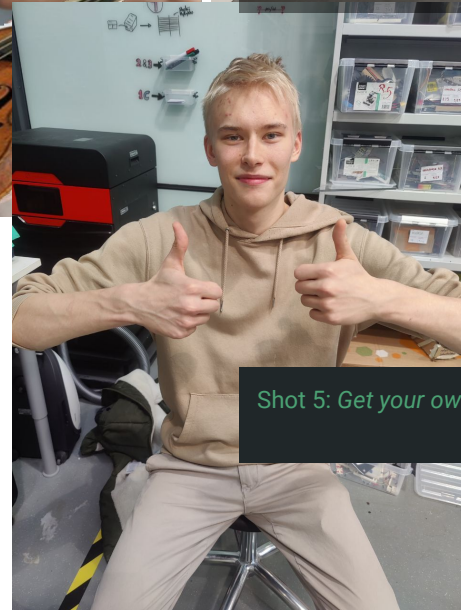
Shot 2: Close-up of musician's frustrated face.
Caption: "There has to be a better way."



Shot 3: Musician got his Note flipper. It is Compact, lightweight, automatic, and designed for musicians on the go.



Shot 4: The musician on stage, confidently performing with the Note Flipper on a stand.



Shot 5: Get your own Note flipper now!

Note Flipper

By: Petteri Suonpää and Jan Hrdlička

Overview

1.

Design concept

2.

Design process

3.

Demo

4.

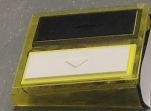
Conclusion

Design Concept: Our solution

The Note flipper



- Automatic
- Wireless
- Fast
- Portable



Design concept: How the device differs from other devices

Offers an alternative to digital interfaces for a more traditional feel



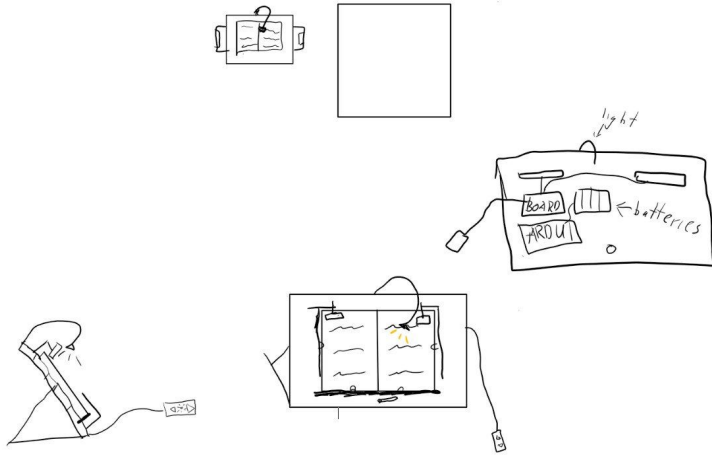
Photo 1: Digital flipper
Source: Adapted from [1]



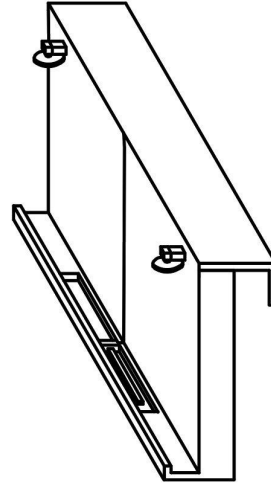
Photo 2: Music note stand
Source: Adapted from [2]

Design process: How did we create the Flipper?

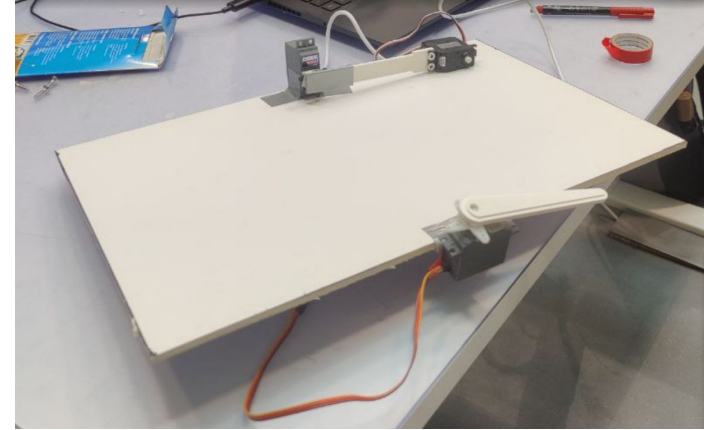
The page flipper mechanism



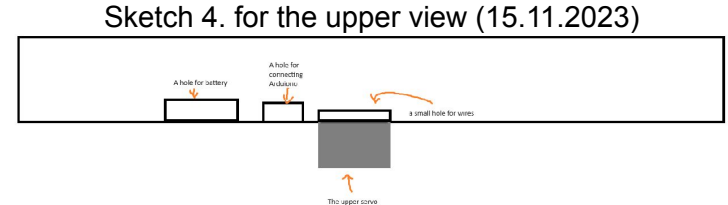
Sketch 1 (26.9.2023)



Sketch 2 (6.10.2023)

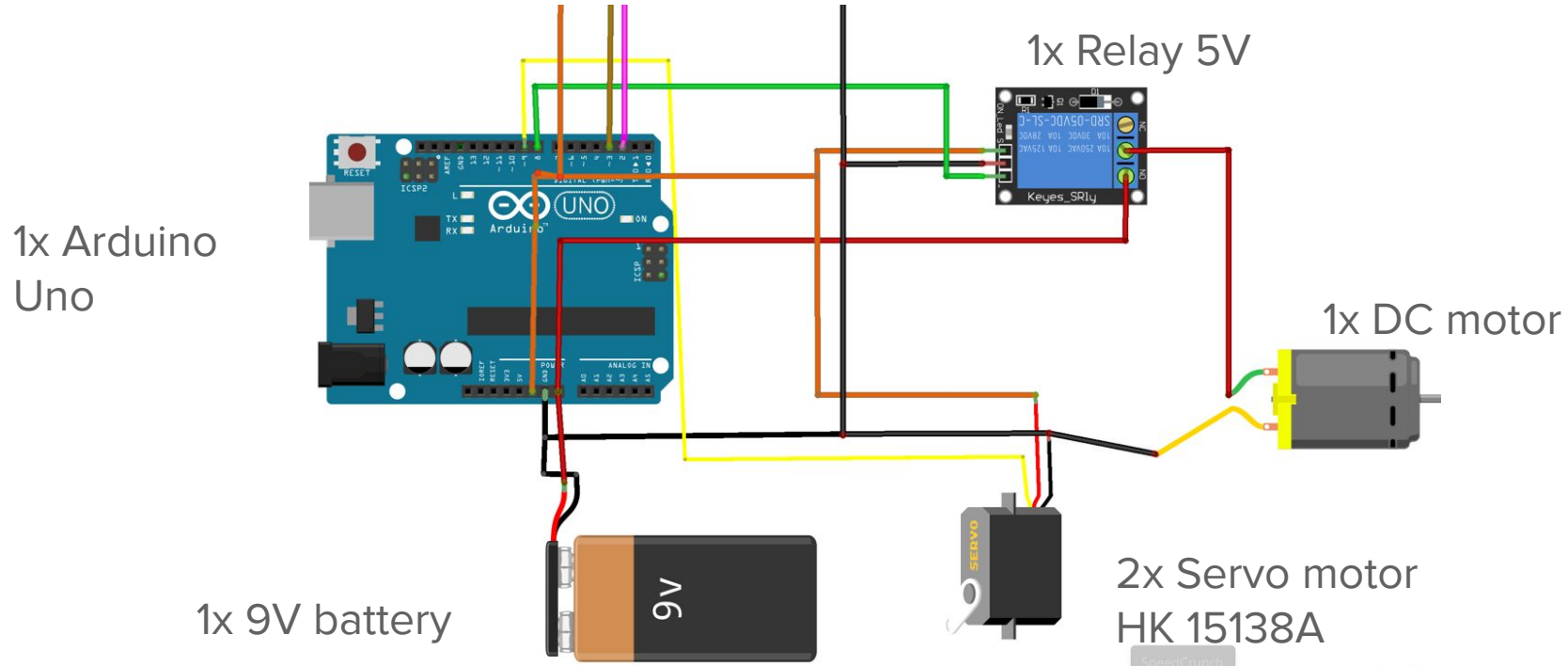


1st iteration prototype (24.10.2023)



Sketch 4. for the upper view (15.11.2023)

What components we wanted: Page flipper Mechanism



SpeedCrunch

fritzing

Components we went with



1x Arduino Uno



2x Servo motor
HK 15138A



1x continuous
Servo motor SM-
S4303R



1x Power Bank

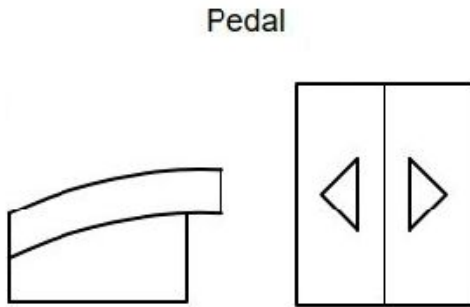


1x HC-06
Bluetooth module

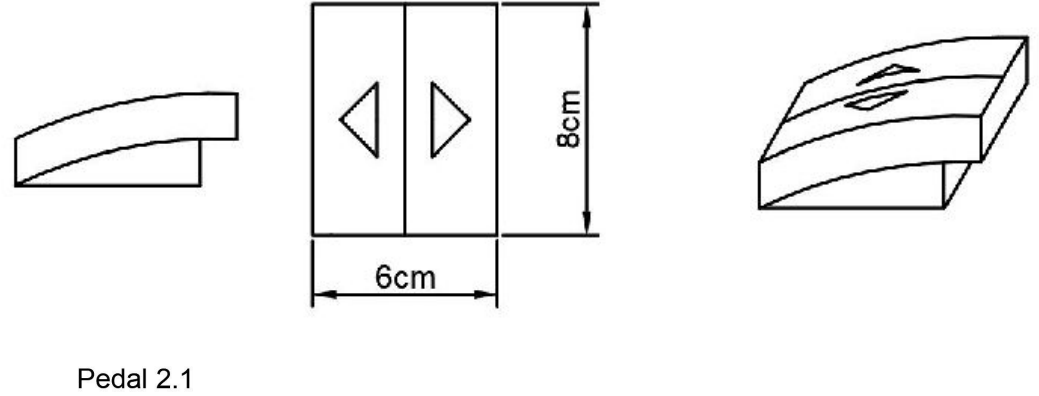
Design process: How did we create the Flipper?

The Pedal mechanism

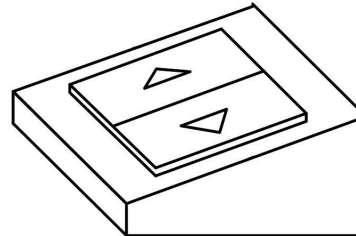
Sketch 1: (3.10.2023)



Sketch 2: (6.10.2023)



Pedal 2.1



Sketch 2: (20.10.2023)

What components used: Pedal mechanism



1x Arduino Uno



1x HC-06
Bluetooth module



1x 9V battery



2x Low buttons

Design process: User study

- Our user study questions were mostly focused on whether musicians would use our product and what design choices we should make.

How should we attach/connect this device to the music stand? *



- ☐ Magnets
- ☐ clip system like we have now



☐ Option 1.



☐ Option 2.



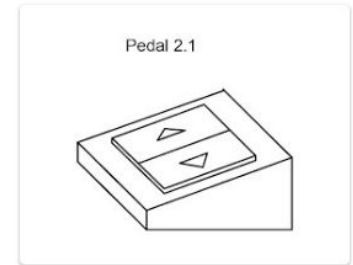
☐ Option 3.



☐ Option 4.



☐ Option 5.



☐ Option 6.

User study results

- To our great surprise the simplest design of the pedal won the user survey

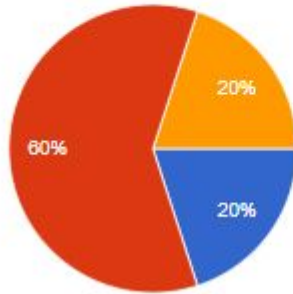
What kind of design you like have for the pedal?

5 vastausta

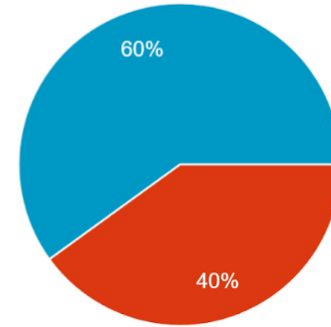


How should we attach/connect this device to the music stand?

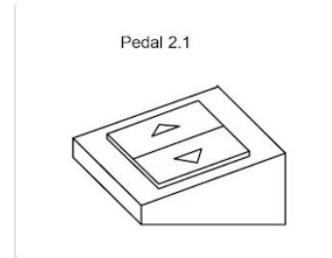
5 vastausta



- Magnets
- clip system like we have now
- I see neither comparative advantages nor disadvantages in particular between the two methods listed above.

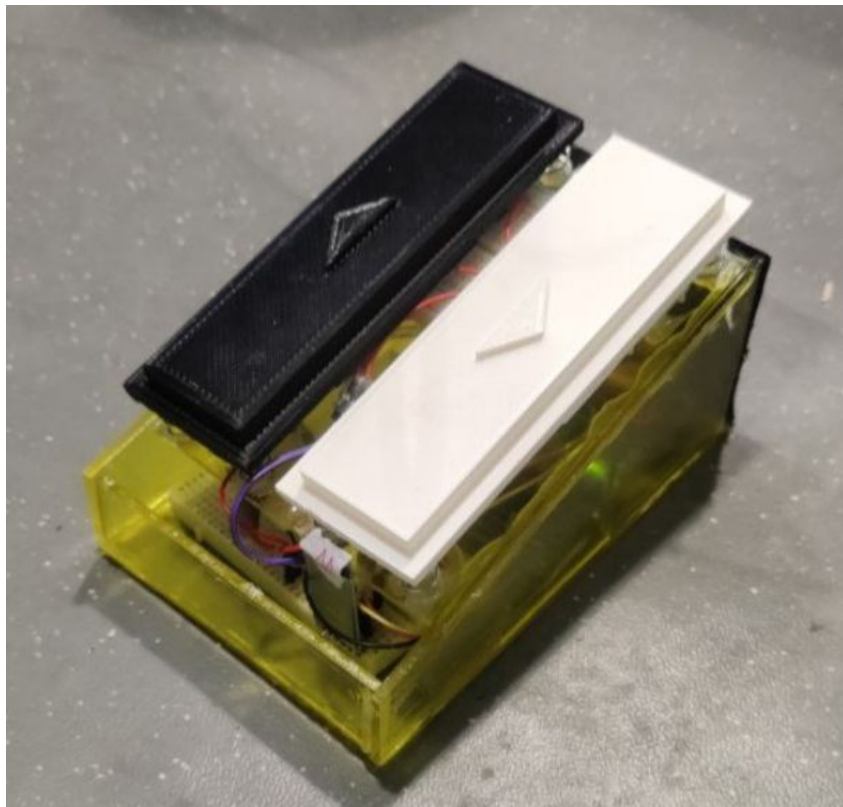


- Option 1.
- Option 2.
- Option 3.
- Option 4.
- Option 5.
- Option 6.



☐ Option 6.

So we made it as the users wanted to



Conclusion

- We made **Note flipper™**
- We **will** eradicate all awkward pauses **for musicians**
- **Automatic**
- **Wireless**
- **Fast**
- **Light**
- **Portable**
- Works with **traditional paper notebooks**



Final product



References:

[1] K Multimedia Page Turner Pedal and Tablet Microphone Stand Mount Kit,... Accessed:14.11.2023. [Online Photo].

<https://www.amazon.com/IK-Multimedia-Tablet-wireless-microphone/dp/B01C5RZWLW>

[2] Music Note Stand Sheet Music Holder Lightweight Adjustable Foldable + Carry Case. Accessed:14.11.2023. [Online Photo].

<https://www.ebay.com.au/itm/392712212086>