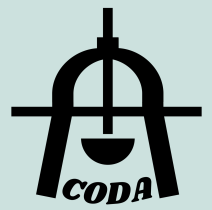




VIBRABELL



ASSISTIVE TECHNOLOGY DESIGN

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CODA

Problem Statement

Client A is **hard of hearing**, and does **not notice** when someone arrives at her apartment **door**. Therefore both family, friends and service workers **cannot** easily **communicate** with the client.

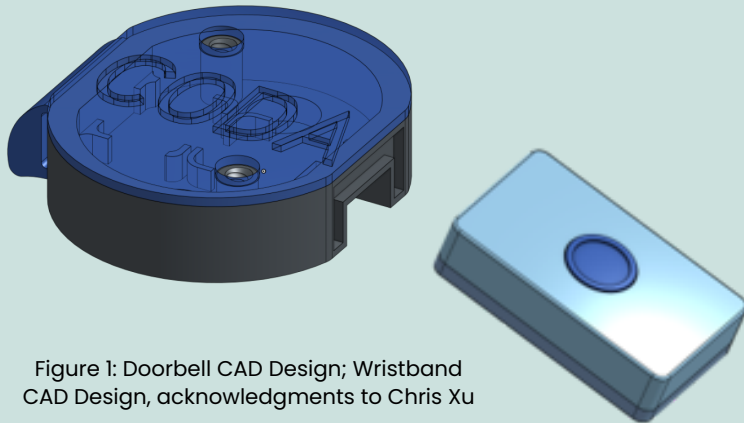


Figure 1: Doorbell CAD Design; Wristband CAD Design, acknowledgments to Chris Xu

Our Solution

An assistive doorbell that **wirelessly** and **soundlessly** notifies the homeowner of a visitor using a **vibration** motor inside a small, wearable wrist-device

How to Use

1. Securely **attach** doorbell to door or desired **surface**
2. Put on wrist device and ensure that the device **contacts** your **skin**
3. To test, **press** central **button** on doorbell and wait to feel a **vibration**
4. Now simply wait for visitors to **ring** your doorbell and notify you soundlessly and wirelessly!



Build Steps

1. Design and construct 2 different casings: the **doorbell** and the **wrist** device.
2. Get two **nRF52840 boards** and **connect** them to each other using the Bluetooth functionality
3. Add a **button** to one board, and a **vibration** motor to the other
4. Put the electronics in each of their respective casings, then **ensure functionality!**



Safety and Maintenance

- Batteries **must** be replaced once in a while
- When opening device for repair, **do not** press button or activate electronics in any way
- **Do not** get device wet
- **Do not** put device under heavy strain