

Pokiai - Personal Wearable

This device records spoken voice, performs speech recognition to transcribe the words, and displays words per minute (WPM) and decibel levels on a small OLED display.

Overview:

Microphone at top to capture voice

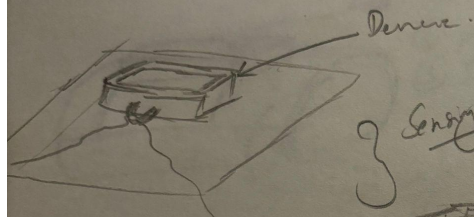
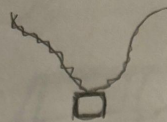
Microcontroller (Raspberry Pi Pico W) in middle for processing

OLED display at bottom to show WPM and DB

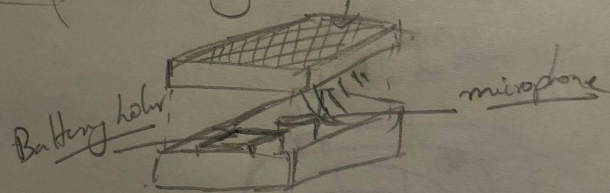
Lithium polymer battery on back with charging port

Small push buttons on side for record/stop

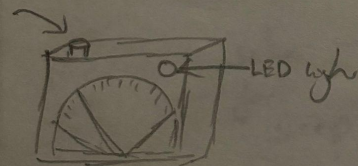
#1



} Sensing Device
and to let voice in



button



} Display line

Sensor Device

Sensor Device:

Microphone: Adafruit I2S MEMS Microphone Breakout - SPH0645LM4H

Microprocessor: Raspberry Pi Pico W

Datasheet presents in Repo.

Display Device

Display Device:

Microprocessor: ESP32

OLED Display: SSD1306 128x32 OLED

Stepper Motor: 28BYJ-48 unipolar stepper motor with the ULN2003 motor driver.

Buttons: 2 x Push Button

Small LED

Communication

