# Product Information

## Product Name

Open Playback Recorder

## Device Category

Adapted Toys

Aids for Daily Living (ADL)

Assistive Switches

Communication Aids (AAC)

Computer Access

Environmental Controls

Gaming

Keyguard

Kits

LipSyncs

Mounting

Recreation and Leisure

Seating and Positioning

Switch Interfaces

Writing Aids

## User Value Statement

## Enables individuals with speech disorders or non-verbal challenges to express themselves by using an assistive switch to play pre-recorded messages.

## Designer

Makers Making Change

# Device Info

## Overview

The Open Playback Recorder is designed for individuals facing communication challenges, such as those with speech disorders, non-verbal individuals, or people with disabilities that impact their ability to communicate verbally. This device allows users to record messages or phrases, which can then be played back when needed by activating an assistive switch. This functionality empowers individuals to express themselves, share information, or engage in conversations, thereby enhancing their overall communication experience and promoting inclusivity in various social settings.

This device has similar functionality to AbleNet’s Big Mack or Step by Step. The Open Playback Recorder has a microphone for recording messages or sounds and a speaker for playing them back. The device can record a single message or a sequence of messages that will be played back in order. The device has three levels so that three sets of messages can be stored and played for different situations.

The device has two 3.5 mm ports for assistive switches. One switch input is used for play and an optional second switch input can be used to cycle between the levels. There are built-in buttons on the device that enable a secondary user or aid to also play, cycle the level, and activate recording. There is also a volume control and lights that indicate when the device is playing, recording, and which level is active.

## Disability Type

Select one or more disability types:

Agility / Dexterity

Arthritis

Cognitive

Hearing

Mobility

Mobility

Other

Pain

SCI

Vision

## Disability Type Description

This device is intended for people for individuals facing communication challenges, such as those with speech disorders, non-verbal individuals, or people with disabilities that impact their ability to communicate verbally.

# How to Use

### Setup

Connect two assistive switches, one to the jack labeled PLAY, and one to the jack labeled LEVEL.

### Power On

To power on the device, flip the switch on the top of the device from OFF to ON.

### Message Recording

To record one or more messages, the device needs to be in Record Mode. The device will record messages to the currently selected level.

**Step 1.** To engage “Record Mode” hold down the REC button for 2 seconds. When Record Mode is engaged, the REC LED will turn red and remain solid.

Note: When Record Mode is engaged, all previous messages on that level will be erased.

**Step 2.** To start message recording, press and hold the PLAY button or assistive switch connected to the play jack. The REC LED will flash red. Record the message into the microphone and release the button to end and save the message. The RED LED will once again turn red and remain solid.

**Step 3.** To record additional messages, repeat Step 2.

Note: These messages will later by played back in the same order they were recorded.

**Step 4.** When the desired messages have been recorded, press the REC button to exit Record Mode. The red REC LED will turn off.

### Message Playback

To play back a message, press an assistive switch connected to the play jack. This will play a message from the current recording level. The play button on the device itself will also allow a secondary user to play a message. Continuing to press the button will cycle through all the messages on that level.

To change the message level, press an assistive switch connected to the level jack. The level shift button on the device will also allow a secondary user to change the message level. The current level will be indicated by the three blue LEDs on the left side of the device.

## Estimated Cost

The estimated material cost of the device:

 $0 - $10

 $11 - $25

 $26 - $50

 $51 - $100

 $101 - $250

 $250+

## Attribution

Designed by Neil Squire Society/Makers Making Change

### Contributors

Brad Wellington, Neil Squire Society / Makers Making Change

Eric Ste

# Maker Info

## Project Skills

3D Printing

Custom PCB

Electronics

Laser Cutting

Mechanics

Other

Software

Soldering

Woodworking

## Skills Description

This build involves 3D printing, soldering and assembling electronics, and flashing firmware.

This is an advanced build that requires lots of soldering and wiring and careful attention to detail. The circuit is constructed on a protoboard, and all the components need to be connected by wires.

## Tools Needed

3D Printer

Common Hand Tools

Common Power Tools

Laser Cutter

Soldering Iron

Specialized Tooling

## Print time (hrs)

24 hrs

## Assembly time (hrs)

5 hrs

## Build Instructions

This device consists of off-the-shelf hardware and electronic components and 3D printed components. This design does not require a custom printed circuit board (PCB). The main work on this build involves soldering together two circuits on protoboards, one for each half of the enclosure, and connecting them together with Dupont wires.

## Download Link

## <https://github.com/makersmakingchange/Open-Playback-Recorder/archive/refs/heads/main.zip>

## Project Link

## <https://github.com/makersmakingchange/Open-Playback-Recorder>

# License

## License

- Everything needed or used to design, make, test, or prepare the Open Playback Recorder is licensed under the [CERN 2.0 Weakly Reciprocal license (CERN-OHL-W v2)](https://cern.ch/cern-ohl) or later .

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