# Introduction

The Single Message Playback Switch is a switch device that can store and play back a single message up to 30 seconds in length. The device can be used both as a toy and as a communication aid.

This device is intended for users with a need for a communication aid, or users that want to add audio feedback to an existing device.

# Research

|  |  |  |  |
| --- | --- | --- | --- |
| Name | Image | Price | Link |
| Commercial | | | |
| LittleMac | A red button on an angled black base | $155 USD | [Link](https://www.ablenetinc.com/littlemack/) |
| Big Step by Step | A flat blue button connected to a black base | $220 USD | [Link](https://www.ablenetinc.com/big-step-by-step/) |
| DIY | | | |
| Single Message Record/Playback Project | A bare PCB connected to a battery pack and a speaker | $27.99 | [Link](https://www.amazon.ca/Velleman-MK174-Message-Playback-Project/dp/B004XZQB24) |

# Requirements

## Goals

|  |  |
| --- | --- |
| G01 | Create a device that can play a message with the press of a switch |

## Functional Requirements

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| --- | --- |
| F01 | Record a message |
| F02 | Play back a message |
| F03 | Be a switch accessible device |

## Constraints

|  |  |
| --- | --- |
| C01 | Device must be low cost |
| C02 | Device must be easily assembled |

# Ideation

The device was inspired by the Open Playback Recorder, and envisioned as a cheaper, simpler version of the device. A dog training button was chosen as the device, and after opening the device, a the central button was found to be identical to the buttons used in most Makers Making Change assistive switches.

A jack was soldered in parallel with the button, and a hole drilled in the casing of the switch to accommodate it. It was also suggested to make one using a “pigtail” style female mono jack. In this case the jack was replaced with a female cable, and a zip tie was used to secure the cable to the device.

# Opportunities for Improvement

Future updates to this project will include mounting brackets to allow the switch to be attached to standard ¼-20 mounting hardware.