# Introduction

The Trigger Extenders for Joy-Con Controller is designed to extend the shoulder bumpers and triggers on the Nintendo Joy-Con Controller to make it easier to activate them.

The device is intended for users that have issues using the shoulder bumpers and triggers on the Nintendo Joy-Con Controller.

# Research

No similar commercial or DIY products could be found.

# Requirements

## Goals

|  |  |
| --- | --- |
| G01 | Extend the shoulder bumpers and triggers so they can be activated from more positions |

## Functional Requirements

|  |  |
| --- | --- |
| F01 | Device must extend the bumpers to be activated from more locations |
| F02 | Device must extend the triggers to be activated from more locations |
| F03 | Device must be easily attached and removed from the Nintendo Joy-Con Grip |

## Constraints

|  |  |
| --- | --- |
| C01 | Device must be entirely 3D printed |

# Testing

The parts were printed, and the extenders were attached and removed from the slide-on trigger attachment 50 times to see if they would hold up over time. At the end of the testing the parts still work, although the attachments are slightly looser.

# Detailed Design

## Slide-on Trigger Attachment

~110x30x20mm

## Shoulder Trigger Extender

~160x35x5mm

## Shoulder Bumper Extender

~140x40x5mm

# Opportunities for Improvement

* The trigger extenders can break after repeatedly attaching and being removed from the trigger attachment. However, they need to be removed to take the Joy-Cons out to charge and use with the main switch body. Redesigning the extender so that it doesn’t block the insertion and removal of the Joy-Cons would extend the lifespan of this device.