

One Handed Modification for The Xbox Series X|S Controller

DESIGN RATIONALE

Introduction

The One Handed Modification for the Xbox Series X|S Controller is a 3D-printed device that allows users to work an Xbox Series X|S with only one hand. This device may benefit users with only one hand, or limited mobility/dexterity in one of their hands. The device will fit Xbox Series X|S controllers.

Research

Xbox Adaptive Controller

The Xbox Adaptive Controller (XAC) allows players with limited mobility to customize their gaming setup for the Xbox with different switches and joysticks. Users can customize the XAC to map various functions to different switches, buttons, and joysticks to suit their needs. Although this option may be preferable for some users, it is expensive and requires users to purchase and customize other devices to use properly.

One Handed Controller Modifications

There are one handed controller modifications available for purchase or DIY. Commercially available modified controllers are typically permanently modified and more expensive than standard controllers. Other DIY options may be difficult for makers and users to create and customize.

Requirements

Goals

G01	Allow people to effectively use an Xbox Series X S controller with one hand.
G02	Help people with one hand and/or limited mobility/dexterity in one hand play video games.

Functional Requirements

F01	Must fit Xbox Series X S controllers.
F02	Must allow players to use the controller with one hand.

Non-functional Requirement

NF01	Must be easy to clean.
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Constraints

C01	Must be printable on standard maker 3D printers.
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Version 1.0

Initial designs by [Akaki](#) and [Ryan Hietanen](#) are licensed under [Creative Commons \(4.0 International License\) Attribution – Non-Commercial – Share Alike](#).

Right handed version 1.0

This design consists of a single .stl file that contains multiple parts. The parts are listed below:

- Thumb-stick mover
- Linkage pieces
- Leg strap/shoe holder
- Mount
- Trigger button pusher
- D-pad pusher
- Leg strap attachment

Left handed version 1.0

This design consists of a single .stl file that contains multiple parts. The parts are listed below:

- Thumb-stick mover
- Linkage pieces
- Leg strap/shoe holder
- Mount
- Trigger button pushers
- Face button pushers
- Leg strap attachment

Optional Parts

The below parts are optional and can be found in their own .stl files.

- Shoe (replaces leg mount)
- Button decorations



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Opportunities for Improvement

- Add a cutout to allow users to easily access the USB-C power port at the back of the controller while using the device
- Split .stl files out into individual components to facilitate replacing parts or printing parts in different colours