**Title**

Oak Compact Joystick -A

**Subtitle**

A medium-sized, non-USB analog joystick that can be used for gaming. This joystick has a large range of motion and is compatible with the Xbox Adaptive Controller.

## Device Specifications

Build Time:

 < 1hr

1-4 hr

 5-10hr

 >10hr

Cost:

 $0 - $10

 $11 - $25

 $26 - $50

 $51 - $100

 $101 - $250

 $250+

Stage:

Skills: Soldering, 3D printing

Need: Agility/Dexterity

Disability: Mobility/Physical

Difficulty: Intermediate

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Usages: Recreation and Leisure, Computer Access

Type: Gaming

Designer: Makers Making Change

## Device Details

### Overview

The Oak Compact Joystick – A is a medium sized, non-USB analog gaming joystick that has 4 interchangeable toppers and is compatible with the XAC. It has an approximately ±25° range of motion and moderate force to operate. It has a 3.5 mm TRRS plug (the size of a headphone jack) and can be used to play games with the Xbox Adaptive Controller (XAC). It may be compatible with other interfaces that use joysticks with 3.5 mm TRRS cables, such as the [Enabled Controller](https://makersmakingchange.com/project/enabled-controller/).

For the USB version of this joystick please see the Oak Compact Joystick – U.

### Usage

1. Plug the 3.5 mm TRRS cable from the joystick into the host device (such as the Xbox Adaptive Controller). If using the Xbox Adaptive Controller, plug it into X1 to use at the left joystick, or plug into X2 to use as the right joystick.
2. Ensure the arrow on the joystick is pointing in the “up/forward” direction, away from the user.
3. Mount the device if needed. Instructions go over three mounting methods:
   1. Table top mounting – non slip pads
   2. Tabletop mounting – hook and loop fasteners
   3. Camera mount with ¼-20 thread
4. Move joystick as you would with a standard controller.

For more detailed usage instructions please see the Oak Compact Joystick – A User Guide available at the GitHub repository.

### Cost

The cost of this device is approximately $55.43 CAD ($47.43 in components, $8 for component shipping).

A more detailed breakdown is available in the bill of materials.

### Build Instructions

The Oak Compact Joystick – A consists of 3D printed parts and electronic components. The Assembly Guide is available at the GitHub repository.

#### Skills Required

* Soldering
* 3D printing

#### Time Required

3D printing time is approximately 5 hours.

Assembly time is approximately 1 hour.

#### Tools

* Wire Strippers
* Soldering Iron
* Philips Head Screwdriver
* Continuity tester (Such as a multimeter)
* (Optional for mount adapter) ¼-20 Screw or Hex Bolt, at least ½” long

#### Components

* Adafruit Mini Analog Joystick
* 4x #4 3/8” Screws
* 3.5 mm Male TRRS Cable
* 1x 4” Zip Tie
* Extra 24 AWG Wire

Optional parts for mounting:

* ¼-20 Tee Nut
* 2x M3 x 10mm Screws
* 2x M3 Nuts

#### 3D Printing

* Oak Enclosure Top
* Oak Enclosure Bottom
* Optional Topper Prints
  + Convex
  + Concave
  + Cylindrical
  + Goalpost

### Design

The enclosure was designed using Autodesk Fusion 360 and the .f3d files are available through the GitHub repository.

### Attribution

Designed by Makers Making Change

Documentation by Neil Squire / Makers Making Change