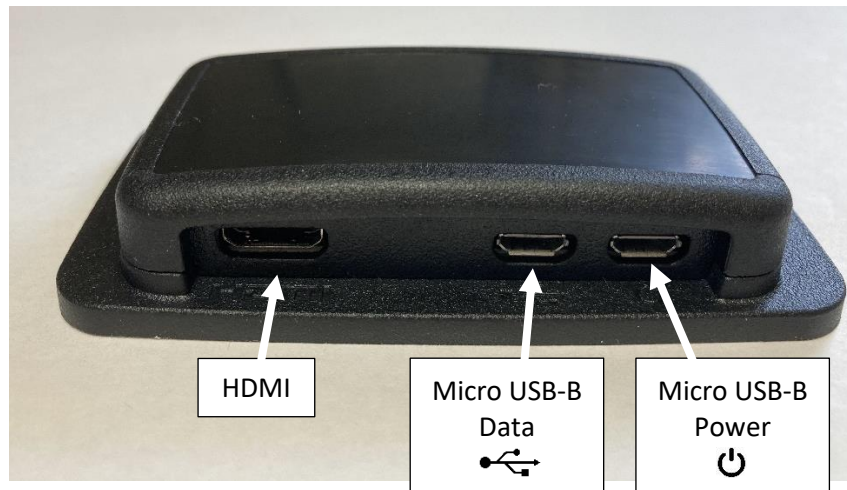# Wheelchair Bluetooth Joystick Adapter
USER QUICK GUIDE

Introduction

The Wheelchair Bluetooth Joystick Adapter is a device that enables a user of a powerchair to use their wheelchair joystick that outputs an HID mouse to act as an HID gamepad.

Features

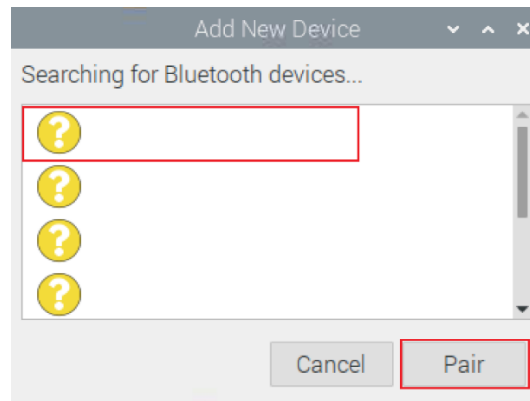## Initial Bluetooth pairing and connection

1. Connect your Wheelchair Bluetooth Joystick Adapter (WBJA) to the display provided using the [HDMI to HDMI cable] and the [HDMI to HDMI mini adapter].
2. Plug in the display to power using the [power cable included with the display].
3. Connect the [USB hub] to WBJA via [USB-A female to USB micro male adapter] plugged into the data port marked with ⚡
4. Plug in a [USB mouse] into the [USB hub].
5. Plug the [USB-B micro power cable] into the WBJA in the power port marked with ⏻ and plug the other end into a power outlet.
6. If a login window appears, login using: **Username:** player **Password:** bluestick (if you need to login, attach a USB keyboard to the USB hub)
7. Click on Bluetooth button icon on top right of Raspberry Pi taskbar.

8. Click on Add Device
9. Select your BT wheelchair Bluetooth mouse module and Click on Pair button

10. Restart WBJA again once your module is successfully paired (either through the User Interface or by unplugging and plugging it back in)
11. Login to your Raspberry Pi again if prompted.
12. Wait 30 seconds for it to initialize.
13. Move wheelchair joystick to initiate the connection if they are already paired.

Usage

See Appendix A for hardware connection diagrams.

1. Plug in your Wheelchair Bluetooth Joystick Adapter (WBJA) to the host device (such as XAC, PC, etc) using a [micro USB-B male to USB-A male cable] via the micro USB-B data port on the WBJA marked with ⚡.
2. Power your Bluetooth enabled input device (Bluetooth Keyboard/mouse or Wheelchair Bluetooth module)
3. Power your Wheelchair Bluetooth Joystick Adapter by plugging the [USB-B micro power cable] into the WBJA in the power port marked with ⏻ and plug the other end into a power outlet.
4. Wait 30 to 60 seconds for it to initialize.
5. You should be able to use your keyboard/mouse/wheelchair Bluetooth module as a joystick at this point.

Wheelchair Bluetooth Joystick Adapter
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Compatibility

The gaming platform must be identified as the adapter is not compatible with all the systems/consoles and additional components may be required.

Platform	Compatibility	Additional Hardware	Tested
Windows	Yes	None	Yes
Mac	Yes	MAGIC NS 2, MAGIC-S PRO 2	None
Android	Yes	None	None
Xbox	Yes	Xbox Adaptive Controller	Yes
Nintendo Switch	Yes	MAGIC NS, MAGIC NS 2, MAGIC-S PRO, MAGIC-S PRO 2, Magic-S Ultimate	None
PS3	Yes	MAGIC NS 2, MAGIC-S PRO, MAGIC-S PRO 2, Magic-S Ultimate	None
PS4	Yes	MAGIC NS 2, MAGIC-S PRO, MAGIC-S PRO 2, Magic-S Ultimate	None
PS5	None	None	None

For a list of compatible Wheelchair Bluetooth Modules, see Appendix B.

Cleaning

The Wheelchair Bluetooth Joystick Adapter can be wiped down with a damp cloth. Do not submerge the device. Do not expose to high heat.
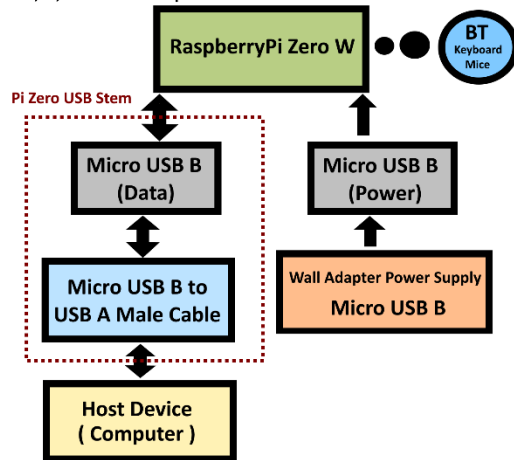
Wheelchair Bluetooth Joystick Adapter
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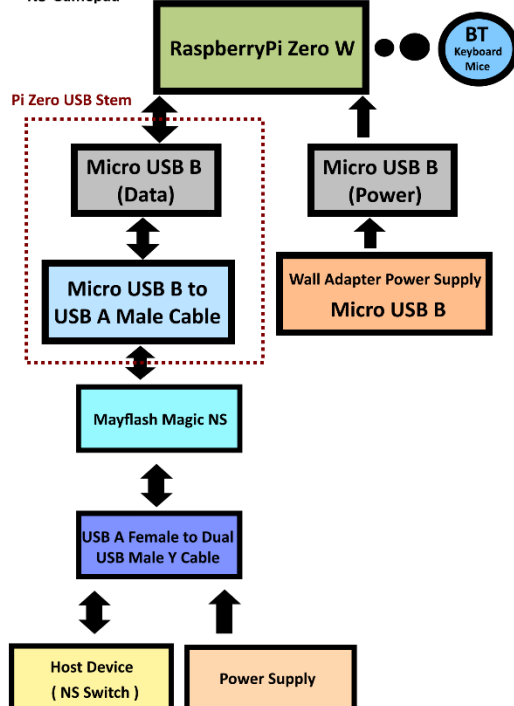## Appendix A

Hardware Connection Diagrams

- Windows and Android

RaspberryPi Zero W Setup Diagram
8,16,32 Button Gamepad

- Mac,Nintendo Switch, PS3, and PS4

RaspberryPi Zero W Setup Diagram
NS Gamepad

Files available at https://github.com/makersmakingchange/Wheelchair-Bluetooth-Adapter
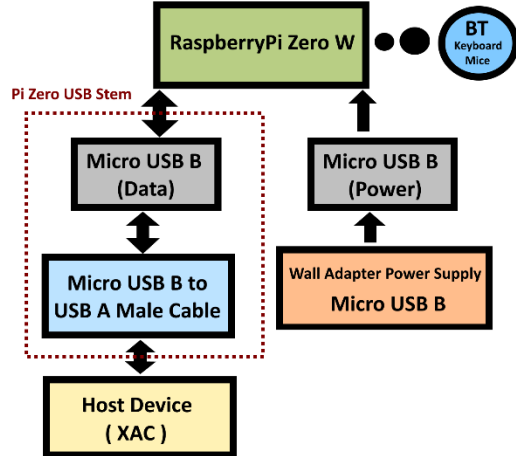
Wheelchair Bluetooth Joystick Adapter
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- Xbox

RaspberryPi Zero W Setup Diagram
XAC Gamepad

Wheelchair Bluetooth Joystick Adapter
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Appendix B – Wheelchair Compatibility

The Wheelchair Bluetooth Module is an essential component of the project and it's important to make sure the module is compatible with the rest of system.

The model of wheelchair joystick and Bluetooth module need to be identified and confirmed its compatibility according to the following tables:

Table 1: Bluetooth Enabled Joystick Options

Joystick Model	Wheelchair Brand	Bluetooth enabled
Q-Logic 2	Quantum Rehab	Integrated Bluetooth Mouse
Q-Logic 3	Quantum Rehab	Integrated Bluetooth Mouse
LiNX REM400	Golden Technologies Drive Medical Invacare Merits Health USA	Integrated Bluetooth Mouse
R-Net Joystick Module w/Bluetooth (CJSM & PJSM)	Permobil, Quickie	Integrated Bluetooth Mouse

Table 2: Bluetooth enabled interface options

Interface Model	Wheelchair Brand	Bluetooth enabled
Q-Logic EX Enhanced Display	Quantum Rehab	Integrated Bluetooth Mouse
R-net OMNI 2	Permobil, Quickie	Integrated Bluetooth Mouse
LiNX REM500 Touch Screen	Golden Technologies Drive Medical Invacare Merits Health USA	Integrated Bluetooth Mouse

Table 3: Bluetooth Addon Modules

Module Model	Wheelchair Brand	Joystick Model
R-net Bluetooth Mouse Module	Permobil, Quickie	R-Net Remote Color Joystick

The wheelchair distributor can provide additional information if the user is not able to provide necessary information.