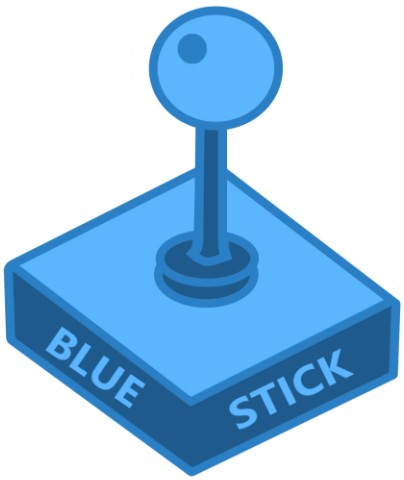


BLUESTICK SETUP GUIDE

Version 0.1

BlueStick project is a gaming input solution based on Raspberry Pi hardware which allows input devices such as HID keyboard and HID mice devices to act as HID gamepad.

Milador
https://github.com/milador/BlueStick

Contents

Prerequisites

Gaming platform identification

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

The gaming platform needs to be identified and confirmed with the end user to allow us to compile the requirements list before we can proceed to the setup process.

Table 1

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

Hardware requirements

There could be multiple hardware options depending on the selected gaming platform by the user and the final option can be selected based on following parameters:

- Cost
- Availability
- Support

The hardware requirements can be categorized to the following groups:

Table 2

Platform	Main Hardware	Requirements
Windows and Android	Raspberry Pi Zero	1. Raspberry Pi zero W x 1 2. Micro SD card x 1 3. Pi Zero USB Stem x 1 4. OTG Micro USB B to USB A Female adapter (For USB mice/keyboard usage) x 1 5. Micro USB B Male to USB A Male cable x 1 6. Mice and keyboard to setup (optional) 7. BT mice/keyboard or USB mice/keyboard as input 8. Power Supply
	Raspberry Pi 4/400	1. Raspberry Pi 4B or Raspberry Pi 400 x 1 2. Micro SD card x 1 3. USB C Male to USB C Female Data and Power Splitter x 1 4. USB C Male to USB A Male cable x 1 5. Mice and keyboard to setup (optional) 6. BT mice/keyboard or USB mice/keyboard as input 7. Power Supply
Mac	Raspberry Pi Zero	1. Raspberry Pi zero W x 1 2. Micro SD card x 1 3. USB Female to Dual USB Male Extra Power Data Y Extension Cable x 1 4. Pi Zero USB Stem x 1 5. OTG Micro USB B to USB A Female adapter (For USB mice/keyboard usage) x 1 6. Micro USB B Male to USB A Male cable x 1 7. Mice and keyboard for setup (optional) 8. BT mice/keyboard or USB mice/keyboard as input 9. Power Supply 10. Mayflash Magic NS 2 or Mayflash Magic S Pro 2 x 1
	Raspberry Pi 4/400	1. Raspberry Pi 4B or Raspberry Pi 400 x 1 2. Micro SD card x 1

		3. USB Female to Dual USB Male Extra Power Data Y Extension Cable x 1 4. Micro USB C Male to USB A Male cable x 1 5. Mice and keyboard to setup (optional) 6. BT mice/keyboard or USB mice/keyboard as input 7. USB C Power Supply 8. Mayflash Magic NS 2 or Mayflash Magic S Pro 2 x 1 9. Micro USB C Male to USB A Female cable x 1 (It's provided in the Mayflash box)
Xbox	Raspberry Pi Zero	1. Raspberry Pi zero W x 1 2. Micro SD card x 1 3. Pi Zero USB Stem x 1 4. OTG Micro USB B to USB A Female adapter (For USB mice/keyboard usage) x 1 5. Micro USB B Male to USB A Male cable x 1 6. Mice and keyboard to setup (optional) 7. BT mice/keyboard or USB mice/keyboard as input 8. Xbox Adaptive Controller x 1 9. Power Supply
	Raspberry Pi 4/400	1. Raspberry Pi 4B or Raspberry Pi 400 x 1 2. Micro SD card x 1 3. USB C Male to USB C Female Data and Power Splitter x 1 4. USB C Male to USB A Male cable x 1 5. Mice and keyboard to setup (optional) 6. BT mice/keyboard or USB mice/keyboard as input 7. Xbox Adaptive Controller x 1 8. Power Supply
Nintendo Switch	Raspberry Pi Zero	1. Raspberry Pi zero W x 1 2. Micro SD card x 1 3. USB Female to Dual USB Male Extra Power Data Y Extension Cable x 1 4. Pi Zero USB Stem x 1 5. OTG Micro USB B to USB A Female adapter (For USB mice/keyboard usage) x 1 6. Micro USB B Male to USB A Male cable x 1 7. Mice and keyboard for setup (optional) 8. BT mice/keyboard or USB mice/keyboard as input 9. Power Supply 10. Mayflash Magic NS (1 and 2) or Mayflash Magic S Pro (1 and 2) x 1

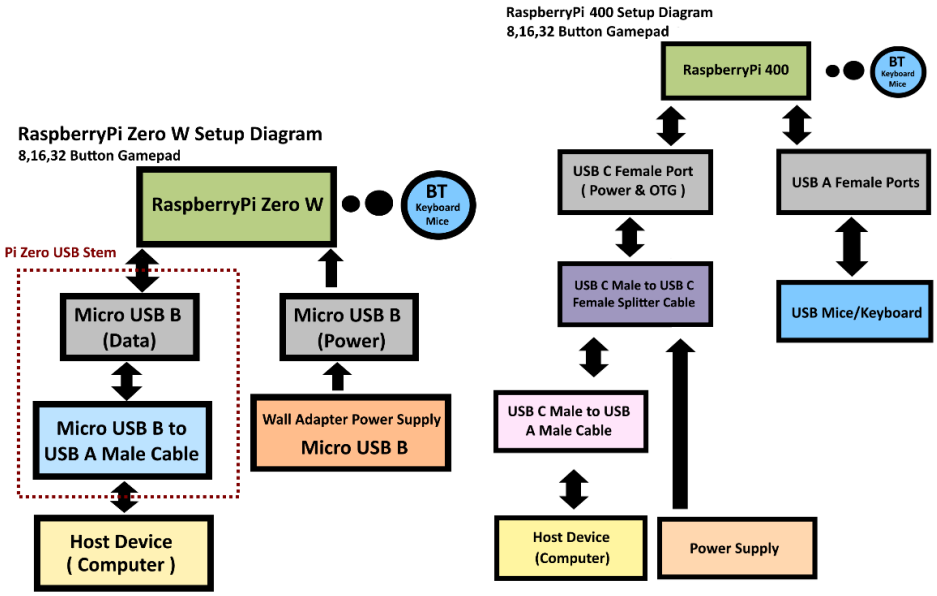
	Raspberry Pi 4/400	1. Raspberry Pi 4B or Raspberry Pi 400 x 1 2. Micro SD card x 1 3. USB Female to Dual USB Male Extra Power Data Y Extension Cable x 1 4. Micro USB C Male to USB A Male cable x 1 5. Mice and keyboard to setup (optional) 6. BT mice/keyboard or USB mice/keyboard as input 7. USB C Power Supply 8. Mayflash Magic NS (1 and 2) or Mayflash Magic S Pro (1 and 2) x 1 9. Micro USB C Male to USB A Female cable x 1 (It's provided in the Mayflash box)
PS3	Raspberry Pi Zero	1. Raspberry Pi zero W x 1 2. Micro SD card x 1 3. USB Female to Dual USB Male Extra Power Data Y Extension Cable x 1 4. Pi Zero USB Stem x 1 5. OTG Micro USB B to USB A Female adapter (For USB mice/keyboard usage) x 1 6. Micro USB B Male to USB A Male cable x 1 7. Mice and keyboard for setup (optional) 8. BT mice/keyboard or USB mice/keyboard as input 9. Mayflash Magic NS 2 or Mayflash Magic S Pro (1 and 2) x 1 10. Power Supply
	Raspberry Pi 4/400	1. Raspberry Pi 4B or Raspberry Pi 400 x 1 2. Micro SD card x 1 3. USB Female to Dual USB Male Extra Power Data Y Extension Cable x 1 4. Micro USB C Male to USB A Male cable x 1 5. Mice and keyboard to setup (optional) 6. BT mice/keyboard or USB mice/keyboard as input 7. USB C Power Supply 8. Mayflash Magic NS 2 or Mayflash Magic S Pro (1 and 2) x 1 9. Micro USB C Male to USB A Female cable x 1 (It's provided in the Mayflash box)
PS4	Raspberry Pi Zero	1. Raspberry Pi zero W x 1 2. Micro SD card x 1 3. USB Female to Dual USB Male Extra Power Data Y Extension Cable x 1 4. Pi Zero USB Stem x 1

		5. OTG Micro USB B to USB A Female adapter (For USB mice/keyboard usage) x 1 6. Micro USB B Male to USB A Male cable x 1 7. Mice and keyboard for setup (optional) 8. BT mice/keyboard or USB mice/keyboard as input 9. Mayflash Magic S Pro (1 and 2) or Mayflash Magic S Ultimate x 1 10. Power Supply
	Raspberry Pi 4/400	1. Raspberry Pi 4B or Raspberry Pi 400 x 1 2. Micro SD card x 1 3. USB Female to Dual USB Male Extra Power Data Y Extension Cable x 1 4. Micro USB C Male to USB A Male cable x 1 5. Mice and keyboard to setup (optional) 6. BT mice/keyboard or USB mice/keyboard as input 7. USB C Power Supply 8. Mayflash Magic S Pro (1 and 2) or Mayflash Magic S Ultimate x 1 9. Micro USB C Male to USB A Female cable x 1 (It's provided in the Mayflash box)

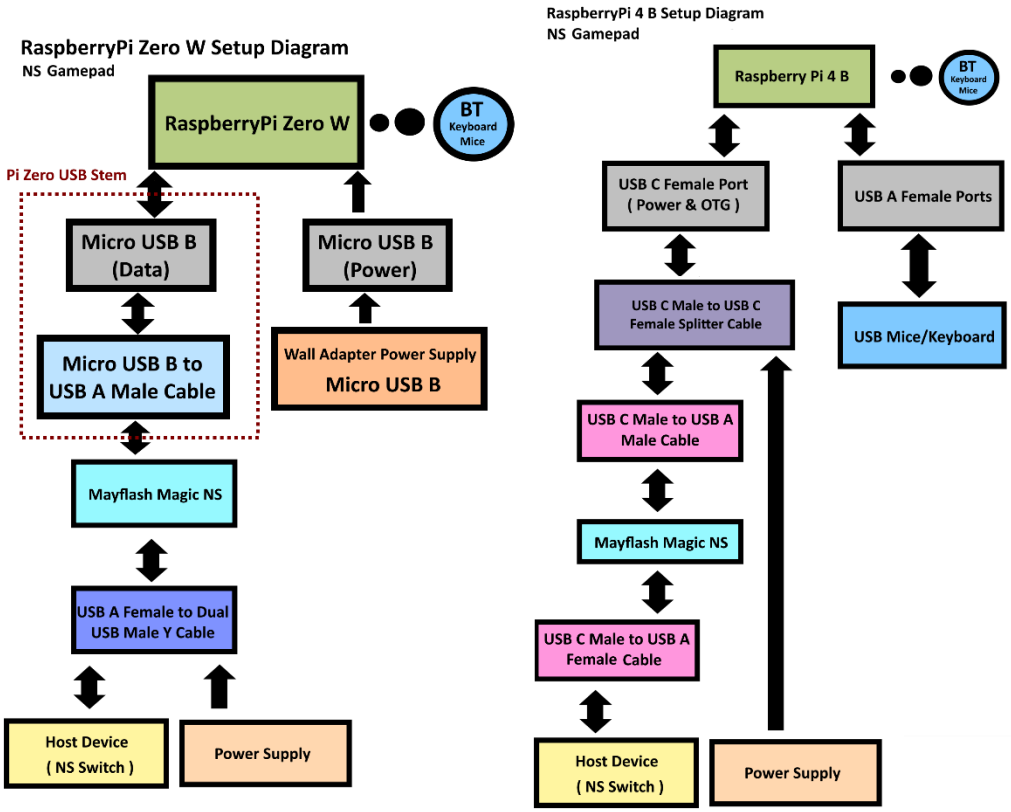
Setup Process

Hardware Setup

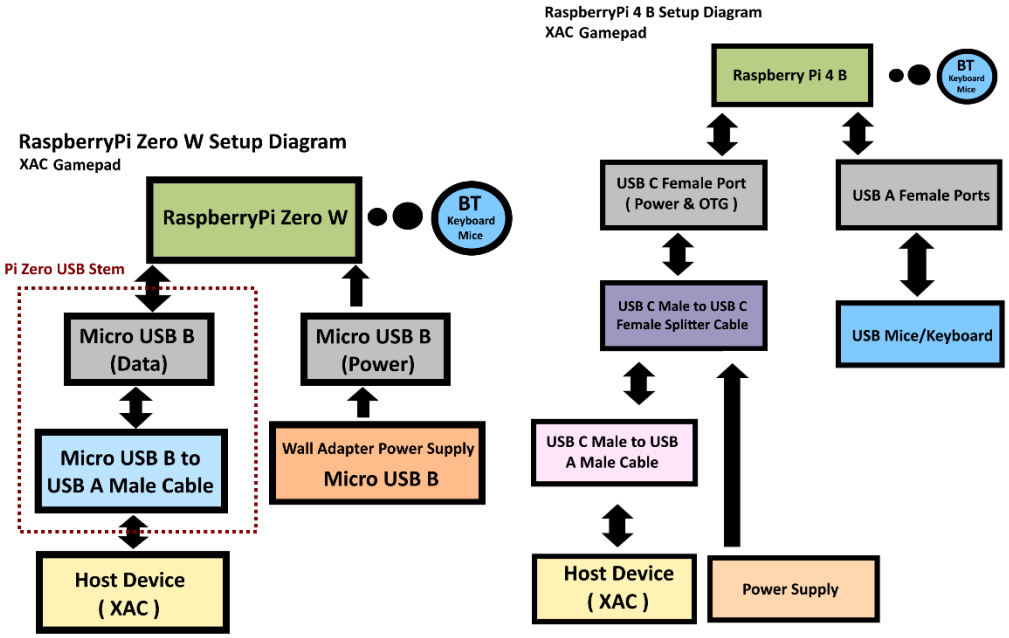
- Windows and Android



- Mac, Nintendo Switch, PS3, and PS4



- Xbox



Software setup

Custom OS Setup

- Install BlueStick OS on an SD card
    1. Download and install Raspberry Pi Imager in your computer.
    2. Download BlueStick OS and extract the ***.img*** file to your desired location.
    3. Insert the MicroSD Card into SD Card reader slot of your computer. (You can use SD Card USB Adapter as well)
    4. Run Raspberry Pi Imager software
    5. Click on the ***CHOOSE STORAGE*** button and select your SD Card drive.
    6. Click on the ***CHOOSE OS*** button and select ***Use Custom***.
    7. Navigate to the location that you saved the ***.img*** file in setp 2.
    8. Click on the ***Open*** button
    9. Click on the ***WRITE*** button and wait for it to write the image to the SD Card.
    10. You will get a dialog box titled ***Write Successful*** once the verification process is complete. Click on the ***CONTINUE*** button.
    11. Remove MicroSD Card and insert it in the SD Card reader slot of your Raspberry Pi.

Manual Setup

- Install Raspbian OS on an SD card
    1. Download and install Raspberry Pi Imager in your computer.
    2. Insert the MicroSD Card into SD Card reader slot of your computer. (You can use SD Card USB Adapter as well)
    3. Run Raspberry Pi Imager software
    4. Click on the "CHOOSE STORAGE" button and select your SD Card drive.
    5. Click on the "CHOOSE OS" button and select "Raspberry Pi OS".
    6. Click on the settings button with a gear icon.
    7. Click on the checkbox next to "Enable SSH" to enable SSH.
    8. Click on the checkbox next to "Configure Wireless LAN", and enter your Wi-fi network username and password.
    9. Click on the "SAVE" button
    10. Click on the "WRITE" button and wait for it to write the image to the SD Card.
    11. You will get a dialog box titled "Write Successful" Once the verification process is complete. Click on the "CONTINUE" button.
    12. Remove MicroSD Card and insert it in the SD Card reader slot of your Raspberry Pi.
- Install Raspbian OS on an SD card
    1. Power on your Raspberry Pi
    2. Login to your Raspberry Pi
    3. Open a web browser
    4. Download install.sh to your main /home/pi/ directory (Make sure you save it as .sh or shell script)
    5. Identity the gaming platform (see table 3) and the argument for it to define your desired configuration.
    6. Run the shell script using terminal window to install the software.
    7. Raspberry Pi will restart once the software is successfully installed.

Table 3

Platform	**Command and argument**
Windows and Android	**sh install.sh 8b**
Mac	**sh install.sh ns**
Xbox	**sh install.sh xac**
Nintendo Switch	**sh install.sh ns**
PS3 and PS4	**sh install.sh ps**

Note: The configuration for XAC Compatible Gamepad will be installed by default. Change the last line of setup.sh for other gamepad configurations.

Input Connection Process

USB connection

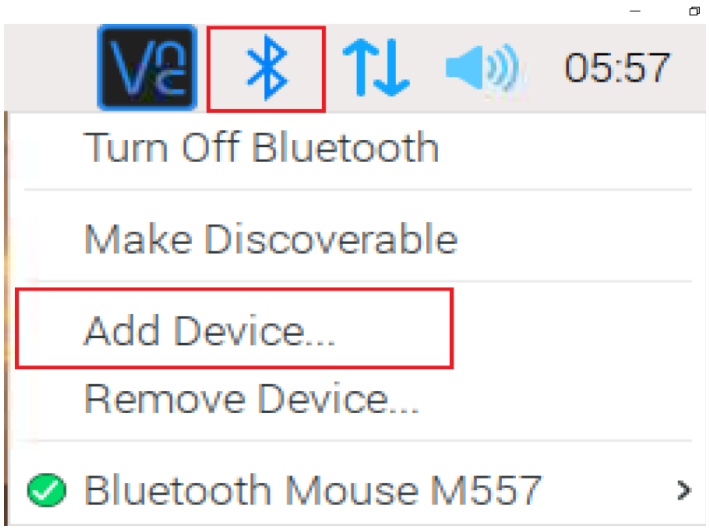
A USB HID input device such as a HID Mice or a HID Keyboard can be used as an input device as long as it doesn't require installation of third-party drivers. Please follow the steps below to connect your USB input device:

1. Login to your Raspberry Pi
2. Plug your HID Mice or HID Keyboard to a USB port of the Raspberry Pi
3. Restart Raspberry Pi
4. Login to your Raspberry Pi again.
5. Wait 30 seconds for it to initialize.
6. You may press a button or a key from your input device to initiate the connection process.

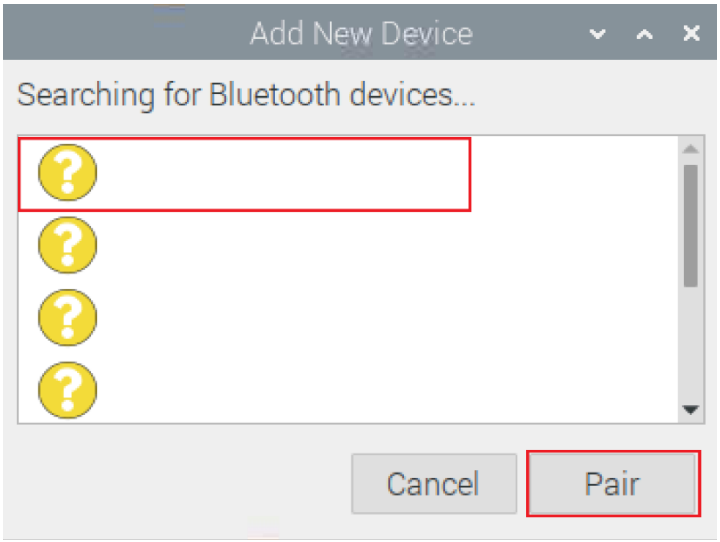
Bluetooth pairing and connection

A Bluetooth HID input device such as a Bluetooth Mice or a Bluetooth Keyboard can be used as an input device once it's paired and connected to the Raspberry Pi. Please follow the steps below to pair and connect your Bluetooth input device:

1. Login to your Raspberry Pi
2. Click on Bluetooth button icon on top right of Raspberry Pi taskbar.



3. Click on Add Device
4. Select your BT wheelchair Bluetooth mouse module and Click on Pair button



5. Restart Raspberry Pi again once your module is successfully paired.
6. Login to your Raspberry Pi again.
7. Wait 30 seconds for it to initialize.
8. You may press a button or a key from your input device to initiate the connection if the device is already paired.