

NEIL SQUIRE SOCIETY'S



# Makers

## Making Change

### GameStik Setup Guide

Version 1.11 (October 20, 2018)



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## Required Software:

- GameStik firmware

[https://github.com/makersmakingchange/GameStik/blob/master/Software/GameStik\\_Firmware/GameStik\\_Firmware.ino](https://github.com/makersmakingchange/GameStik/blob/master/Software/GameStik_Firmware/GameStik_Firmware.ino)

- The Joystick library needs to be installed before uploading Joystick firmware from following link:

<https://github.com/MHeironimus/ArduinoJoystickLibrary>

## Installation Instructions:

1. Download the GameStik firmware from following link:

[https://github.com/makersmakingchange/GameStik/blob/master/Software/GameStik\\_Firmware/GameStik\\_Firmware.ino](https://github.com/makersmakingchange/GameStik/blob/master/Software/GameStik_Firmware/GameStik_Firmware.ino)

2. Visit the **"ArduinoJoystickLibrary"** GitHub repository using following link: [1]

<https://github.com/MHeironimus/ArduinoJoystickLibrary>

3. Download the **"ArduinoJoystickLibrary"** by clicking on **"Clone or Download"** button and then selecting **"Download ZIP"** option.
4. Extract the **"ArduinoJoystickLibrary-master.zip"** file.
5. Copy the Joystick folder to the Arduino libraries folder.

An example of path to Arduino libraries folder in Windows: **"C:\Program Files (x86)\Arduino\libraries"**.

6. Once the folder has been copied, the Joystick library should appear in the Arduino IDE list of libraries.
7. Open Arduino IDE and you should be able to see Joystick examples under **"File>Examples>Joystick"**.
8. Now open the **"GameStik\_Firmware.ino"** file using Arduino IDE.
9. Select the **"Arduino/Genuino Micro"** as the Board and then select the available port number under Tools option.
10. Click on upload button to upload the code.

## Functions (Computer):

Action	Function	Time (Seconds)
<b>Joystick (Right)</b>	Move Right on X-axis	N/A
<b>Joystick (Down)</b>	Move Down on Y-axis	N/A
<b>Joystick (Left)</b>	Move Left on X-axis	N/A
<b>Joystick (Up)</b>	Move Up on Y-axis	N/A
<b>Puff</b>	Press Button Number 5	1
<b>Sip</b>	Press Button Number 6	1
<b>Puff</b>	Press Button Number 4	2
<b>Sip</b>	<b>Press Button Number 1<sup>1</sup></b>	2
<b>Puff</b>	Press Button Number 7	3
<b>Sip</b>	Press Button Number 8	3

**Table 1: Computer Functions**

**Note 1: The press button 1 or 2-second long sip is reserved to be used for Xbox Adaptive Controller.**

## Functions (Xbox Adaptive Controller):

The following functions are the default options for the specified actions which can be modified using profile settings. [2]

Action	Function (Left USB)	Function (Right USB)	Time (Seconds)
Joystick (Right)	Move Right on X-axis	Move Right on X-axis	N/A
Joystick (Down)	Move Down on Y-axis	Move Down on Y-axis	N/A
Joystick (Left)	Move Left on X-axis	Move Left on X-axis	N/A
Joystick (Up)	Move Up on Y-axis	Move Up on Y-axis	N/A
Puff	A	X	1
Sip	B	Y	1
Puff	LB	RB	2
Sip	X1 <sup>2</sup>	View <sup>1</sup>	2
Puff	View	X1	3
Sip	Menu	X2	3

**Table 2: Xbox Adaptive Controller Functions**

The Xbox Adaptive Controller comes with the option to configure and map buttons using three different mapping profiles. The profiles can be switched using the **Profile** button on the Xbox Adaptive Controller. The profiles can be edited based on the needs of the user. [3] The **Shift** button action can be used to switch between buttons when the **Shift** functionality is configured in the **Profile** settings. [4]

**Note 2: The LED on the GameStik will blink once in green when the X1 button action or 2-second long sip is performed. The X1 button action or 2-second long sip is reserved to be used as Shift button which is used to switch between primary and shift button actions.**

Please follow the instructions below to map the buttons through the **Profile** settings:

- Press the **Xbox** button to open the guide.
- Select **Home > Settings > Kinect and Devices** and choose **Devices & Accessories**.
- Press the **A** button or short puff.
- Select **Xbox Adaptive Controller**.
- Select **Configure** option and then press the **A** button or short puff to enter.
- Select **New profile** and then press the **A** button or short puff to enter.

- Enter the name for the new profile. *GameStik1* can be used as an example.
- Select the button that you would like to map under *Mapping* menu and then press the *A* button or short puff to enter.
- Assign the *Primary* and *Shift* button actions for selected button.
- Press the *B* button or short sip when you are finished.
- The following three examples can be used to map the main buttons:
  - *A* button or short puff
    1. Select the *A* button under *Mapping* menu and then press the *A* button or short puff to enter. We select the *A* button which is activated by short puff as the first example when *GameStik* is connected to the left USB 2.0 port.
    2. Assign the *Primary* and the *Shift* button actions for selected *A* button.
    3. The *Primary* button action is assigned to the *A* button and the *Shift* button action is assigned to the *X* button for the *A* button in the *GameStik1* profile example.
    4. Press the *B* button or short sip when you are finished.
  - *B* button or short sip
    1. Select the *B* button under *Mapping* menu and then press the *A* button or short puff to enter. We select the *B* button which is activated by short sip as the second example when *GameStik* is connected to the left USB 2.0 port.
    2. Assign the *Primary* and the *Shift* button actions for selected *B* button.
    3. The *Primary* button action is assigned to the *B* button and the *Shift* button action is assigned to the *Y* button for the *B* button in the *GameStik1* profile example.
    4. Press the *B* button or short sip when you are finished.
  - *LB* button or 3 seconds long puff
    1. Select the *LB* button under *Mapping* menu and then press the *A* button or short puff to enter. We select the *LB* button which is activated by 2-second long puff as the third example when *GameStik* is connected to the left USB 2.0 port.
    1. Assign the *Primary* and the *Shift* button actions for selected *LB* button.
    2. The *Primary* button action is assigned to the *LB* button and the *Shift* button action is assigned to the *RB* button for the *LB* button in the *GameStik1* profile example.
    3. Press the *B* button or short sip when you are finished.

- Select the button that you would like to map to the **Shift** button action under the **Mapping** menu and then press the **A** button or short puff to enter. We select the **X1** button which is activated by 2-second long sip as an example when **GameStik** is connected to the left USB 2.0 port.
- Select the **Use as Shift** button check box and then press the **A** button or short puff to enter.
- Press the **B** button or short sip when you are finished.
- Press the **B** button or short sip again to enter the **Profiles** page again.
- Select the new created profile which is **GameStik1** as an example and then press the **A** button or short puff to enter.
- Next save the new profile by selecting the **No Slot** dropdown menu and then pressing the **A** button or short puff to enter.
- Select one of the three available slots and then press the **A** button or short puff to save the profile.
- **GameStik1** profile is now ready to use. Press the Profile button on the Xbox Adaptive Controller to switch between profiles and select **GameStik1** profile.

The Table below represents the mapped functions for **GameStik1** profile example.

Action	Primary	Shift	Time (Seconds)
<b>Joystick (Right)</b>	Move Right on X-axis	Move Right on X-axis	N/A
<b>Joystick (Down)</b>	Move Down on Y-axis	Move Down on Y-axis	N/A
<b>Joystick (Left)</b>	Move Left on X-axis	Move Left on X-axis	N/A
<b>Joystick (Up)</b>	Move Up on Y-axis	Move Up on Y-axis	N/A
<b>Puff</b>	A	X	1
<b>Sip</b>	B	Y	1
<b>Puff</b>	LB	RB	2
<b>Sip</b>	<b>X1 (Shift Button)</b>	<b>X1 (Shift Button)</b>	2
<b>Puff</b>	View	View	3
<b>Sip</b>	Menu	Menu	3

**Table 3: GameStik1 profile Functions**

## References

1. [ArduinoJoystickLibrary Github repository](#)
2. [What external devices work with the Xbox Adaptive Controller?](#)
3. [Customize the Xbox Adaptive Controller in the Xbox Accessories app](#)
4. [How do I use Shift with the Xbox Adaptive Controller?](#)