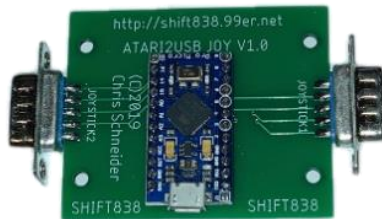


ATARI2USB ADAPTER



Last Updated: July 27, 2019

SHIFT838 announces the new ATARI2USB Joystick Adapter for 2019.

Have you ever wanted to be able to pull those old retro style Atari 2600 type joysticks or compatibles out of storage and hook them up to your PC? Want to have that full retro feeling again? Well this is the solution.

The ATARI2USB joystick adapter allows a user to hook up vintage Atari 2600 compatible joysticks for 1 and 2 buttons to a PC via the USB port. This adapter recognizes up to 2 joysticks and has been tested on Windows 10 and Linux Ubuntu 18.04.

Atari compatible joysticks for 2 buttons do require the 2nd button to be wired to the standard pin #9 of the joystick. If your joystick is setup for a 2nd button and wired this way the 2nd button will work (this was default for Atari 2 button joysticks).

The joystick adapter utilizes an Arduino Pro Micro controller with USB interface. The Arduino has been custom coded to interpret the appropriate Atari joystick signals and translate to USB.

Requirements:

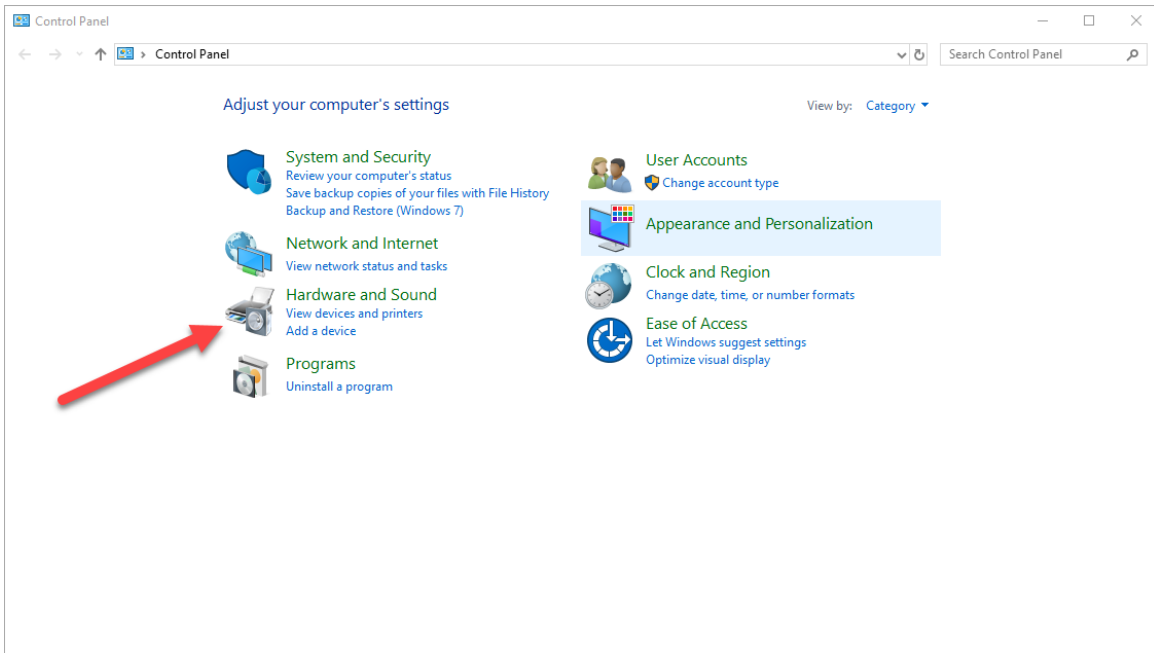
- Windows (Tested on Windows 10)
- Linux Ubuntu 18.04
- Micro USB cable
- Atari 2600 compatible joystick
- Designed to fit into a Hammond 1591XXL case (not included)

Installation:

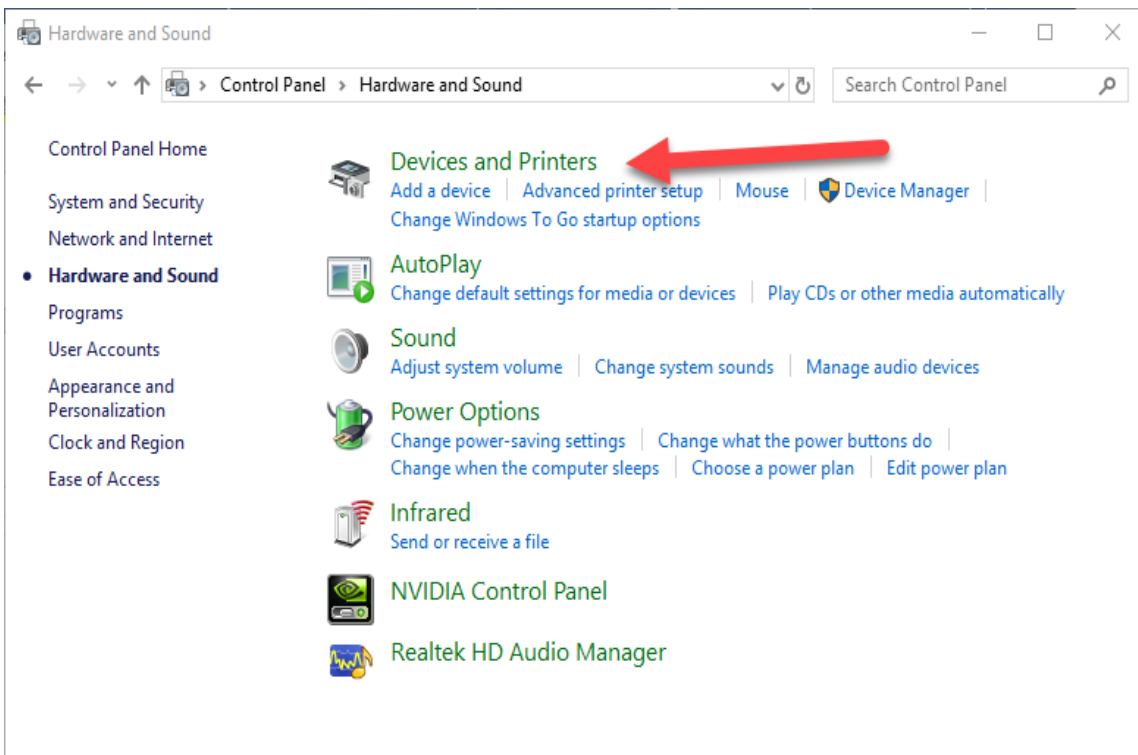
Windows OS

The unit is plug-n-play, so windows 10 will recognize this device with no issues. Windows 10 will recognize the device as a Arduino Leonardo Gamepad as a Arduino microcontroller is used.

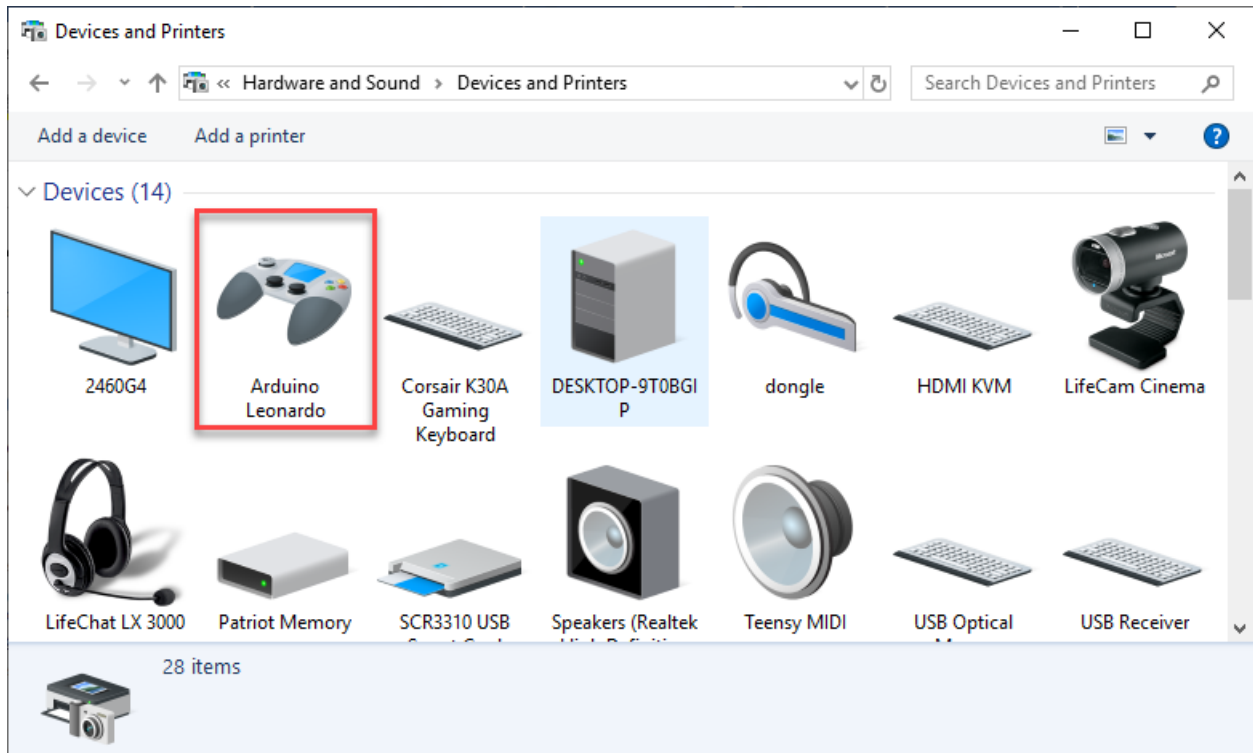
1. Plug the Micro USB cable into the computer and then into the ATARI2USB Adapter and let Windows detect and setup the device.
2. Plug Atari 2600 compatible joystick into port #1 or port
3. Open Control Panel
4. Click Hardware and Sound



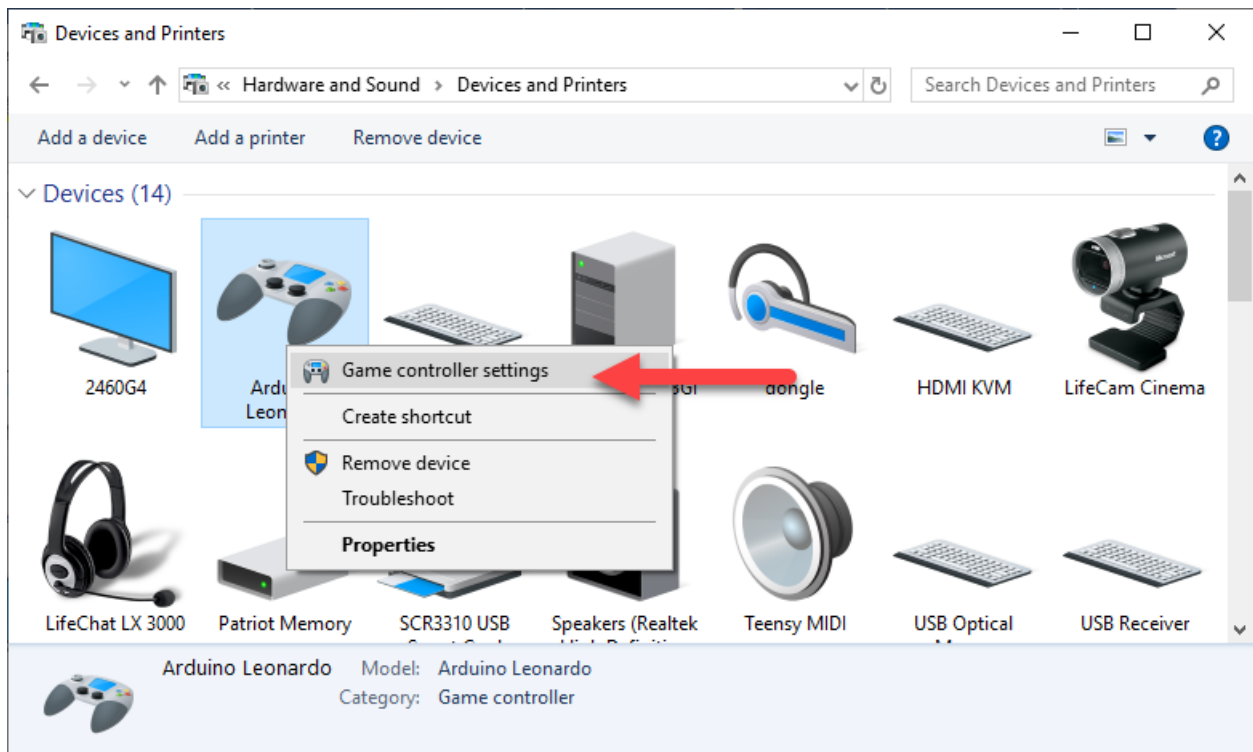
5. Click Devices and Printers



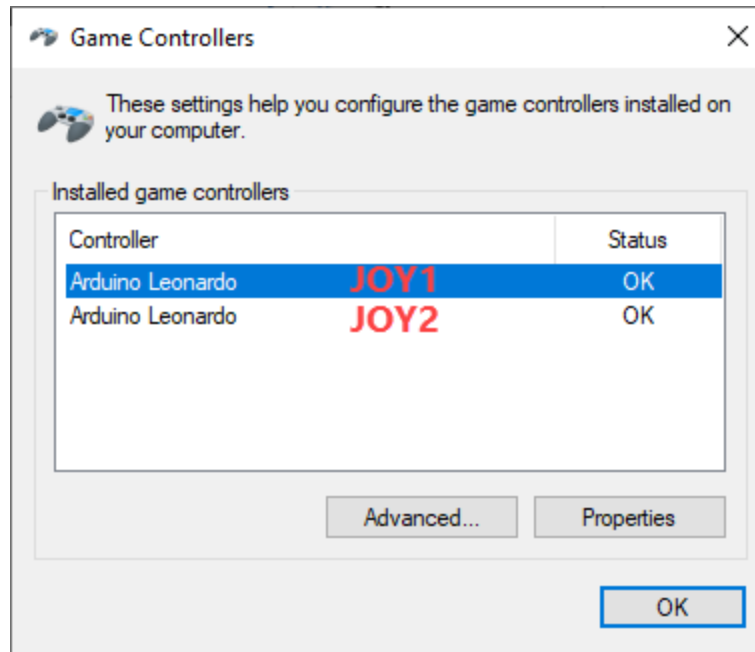
The game controller is detected and shown as:



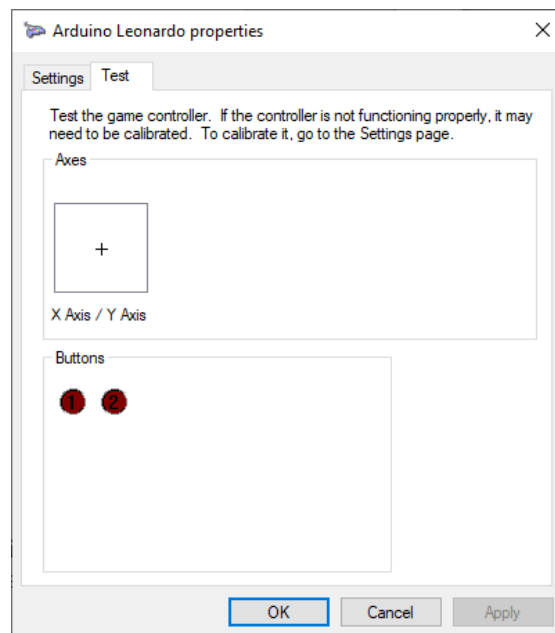
↳ Right click the game controller and select Game Controller Settings



This will open the Game controller settings.



7. Select each controller and click the properties to verify functionality, which will bring up the joystick calibration screen.



With the joystick plugged into the correct port press the fire button and button 1 should light up on the properties. Move the joystick up, down, left and right and the cross-hair will move to the correct location.

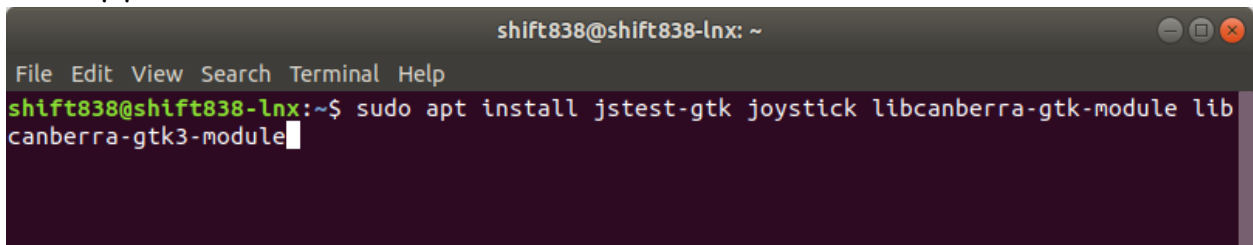
If your joystick has a button #2 wired up to pin #9 of the standard joystick pressing fire button #2 will light the #2 fire button.

If using joystick #2 cancel out and select joystick #2 with the Joystick plugged in to the 2nd port and repeat.

Linux

The unit is plug-n-play, so Linux will recognize this device but only with one joystick as the standard USBHID driver loaded with the OS does not recognize multiple joysticks within one. However, this can be changed with little effort. Linux will recognize the joystick adapter as a Leonardo Gamepad as a Arduino microcontroller is used.

1. Plug the Micro USB cable into the computer and then into the ATARI2USB Adapter and let Windows detect and setup the device.
2. Plug Atari 2600 compatible joystick into port #1 or port
3. Launch a terminal window
4. Issue the below in order to install the joystick support for Linux.



```
shift838@shift838-lnx: ~  
File Edit View Search Terminal Help  
shift838@shift838-lnx:~$ sudo apt install jstest-gtk joystick libcanberra-gtk-module lib  
canberra-gtk3-module
```

5. Now issue the "lsusb" command to find the VID and PID of the Atari Joystick Adapter.

```
shift838@shift838-lnx: ~
File Edit View Search Terminal Help
shift838@shift838-lnx:~$ lsusb
Bus 002 Device 002: ID 8087:0024 Intel Corp. Integrated Rate Matching Hub
Bus 002 Device 001: ID 1d6b:0002 Linux Foundation 2.0 root hub
Bus 001 Device 007: ID 0557:2288 ATEN International Co., Ltd
Bus 001 Device 005: ID 0557:8021 ATEN International Co., Ltd CS1764A [CubiQ DVI
KVMP Switch]
Bus 001 Device 020: ID 1bcf:0053 Sunplus Innovation Technology Inc.
Bus 001 Device 019: ID 1b1c:1b0a Corsair
Bus 001 Device 018: ID 05e3:0608 Genesys Logic, Inc. Hub
Bus 001 Device 003: ID 0409:005a NEC Corp. HighSpeed Hub
Bus 001 Device 002: ID 8087:0024 Intel Corp. Integrated Rate Matching Hub
Bus 001 Device 001: ID 1d6b:0002 Linux Foundation 2.0 root hub
Bus 004 Device 001: ID 1d6b:0003 Linux Foundation 3.0 root hub
Bus 003 Device 004: ID 2341:8036 Arduino SA Leonardo (CDC ACM, HID)
Bus 003 Device 001: ID 1d6b:0002 Linux Foundation 2.0 root hub
shift838@shift838-lnx:~$
```

My Atari USB Joystick adapter as it should is listed as "Arduino SA Leonardo (CDC ACM, HID)". The VID is "2341" and the PID is "8036". Yours may be different.

6. Now issue the below command inserting your VID and PID found from the above step.

This command below removes the USBHID driver and reinstalls it. But this time it enables the HSB-HUB Feature for it so that the adapter will be detected as 2 joysticks.

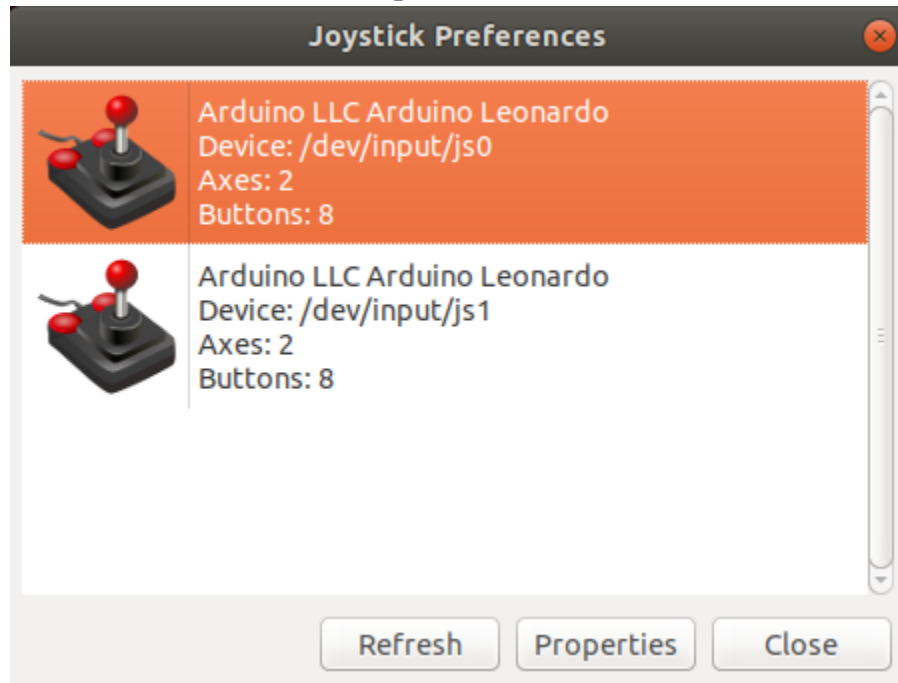
```
shift838@shift838-lnx: ~
File Edit View Search Terminal Help
shift838@shift838-lnx:~$ sudo rmmmod usbhid && sudo modprobe usbhid quirks=0x2341:0x8036:0x40
```

7. Navigate to the /dev/input directory

8. Issue a 'ls' command to show the directory contents and you should now see a "js0" and "js1" directory detecting both Joystick 1 and 2.

```
shift838@shift838-lnx: /dev/input
File Edit View Search Terminal Help
shift838@shift838-lnx:/dev/input$ ls
by-id      event10  event14  event18  event21  event6   js0       mouse1
by-path    event11  event15  event19  event3    event7   js1
event0     event12  event16  event2    event4    event8   mice
event1     event13  event17  event20  event5    event9   mouse0
shift838@shift838-lnx:/dev/input$
```

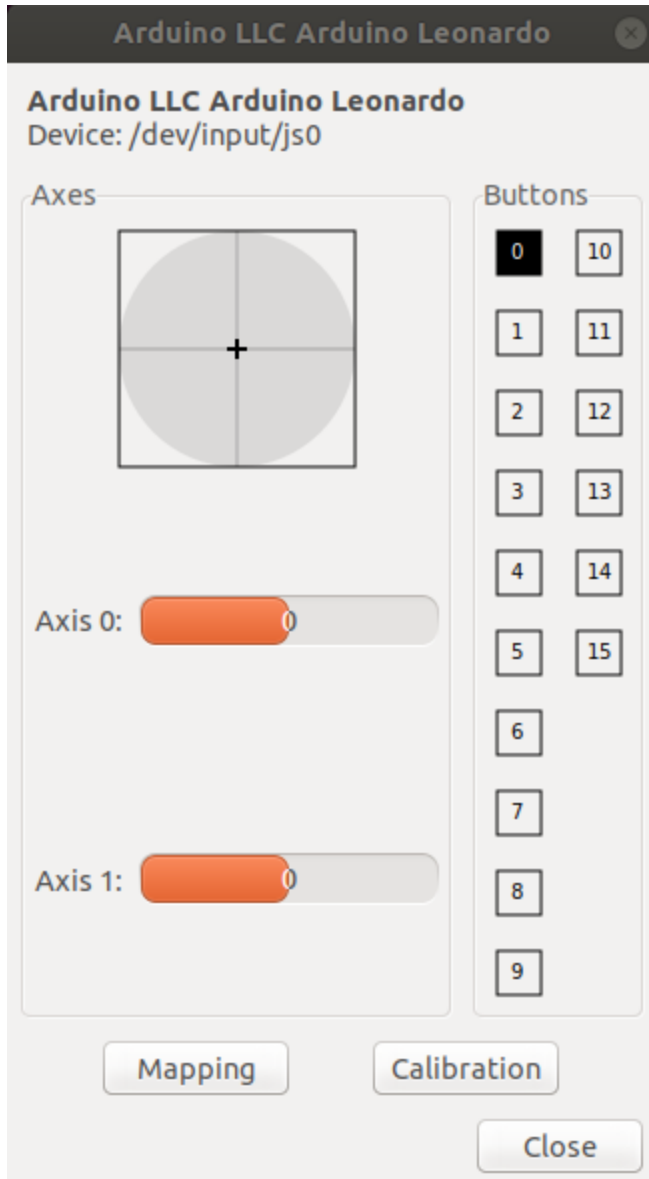
9. Issue the "jstest-gtk" to bring up the joystick test and calibration gui.



10. Select device /dev/input/js0 (joystick 1) and click the "Properties" button.

11. Press your fire button(s) and up, down, left, right directions and the respective signals will show on the test screen.

Note: Button 1 = 0 ; Button 2 = 1 ;
Crosshairs will move in the direction of the joystick when moved.



12. Close
13. Select /dev/input/js1 (joystick 2)
14. Repeat above to test Joystick 2

For Support or questions send an email to:

838sup@gmail.com