

Hello and welcome to Hardware: It's not just for EE's anymore!


We hope to relate some of the basic concepts of controlling hardware from the software world as well as controlling software from the hardware world.

For this class we will be putting together a game controller from custom and off the shelf components. One of these components is the "PRO Trinket" Arduino clone from a company named "Adafruit" ([www.adafruit.com](http://www.adafruit.com))

Please have access to the following tools a priori.

1. Download and install the standard Arduino Integrated Development Environment (IDE) from:  
[Install Arduino Software](#)  
Select the

## Download the Arduino Software



### ARDUINO 1.6.9

The open-source Arduino Software (IDE) makes it easy to write code and upload it to the board. It runs on Windows, Mac OS X, and Linux. The environment is written in Java and based on Processing and other open-source software.

This software can be used with any Arduino board. Refer to the [Getting Started](#) page for Installation instructions.

**Windows** Installer  
**Windows** ZIP file for non admin install

**Mac OS X** 10.7 Lion or newer

**Linux** 32 bits  
**Linux** 64 bits  
**Linux** ARM (experimental)

[Release Notes](#)  
[Source Code](#)  
[Checksums](#)

2. Install the USB drivers on your computer. For details on installing the drivers for Windows XP, 7, 8 etc... please read this page (<http://adafru.it/cDY>)

## Drivers

- › AVR programmer & SPI interface
- › Windows 7, 8 & XP

Before you plug in your board, you'll need to possibly install a driver!

Click below to download our Driver Installer

Download Adafruit Driver Installer

3. MAC users: just install the IDE and plug the controller in.
4. Special Notes on using Pro Trinket with Linux:
  - a. Pro Trinket is not supported on Linux operating system at this time - try Mac OS or Windows! However, you can try the following - it does work for some computers
  - b. Linux is fairly picky about who can poke and prod at the USB port. You can always run avrdude or Arduino IDE as root, which will make sure you have the proper permissions. If you want to be super-cool you can add a udev rule which will let any user (who is not root) connect to the USBtiny driver. That way you don't have to be root all the time!
  - c. Check <http://learn.adafruit.com/usbtinyisp/avrdude#for-linux> for what to add to your udev file.
5. Arduino IDE Setup: Just follow the steps in the steps in the [Adafruit Arduino IDE setup guide](#) to easily install a pre-configured Arduino IDE to program Pro Trinket!
6. We will be using the bare Pro Trinket, programming it using the on board USB connector and boot loader. Watch this video to familiarize yourself with the basic process. [Starting the Bootloader](#)