

# Getting Started – Installing Arduino Software

This tutorial will walk you through downloading, installing, and testing the [Arduino software](#) available at [Arduino.cc](#) (click on the Download link near the top of the page). This program is known as the Arduino IDE - short for Integrated Development Environment. Before you jump to the page for your operating system, make sure you've got all the right equipment. The programming environment outlined in this document is provided by [Arduino.cc](#) free of charge and is the recommended programming environment for your DuinoKit.

What you will need:

- A computer (Windows, Mac, or Linux)
- An Arduino-compatible microcontroller (DuinoKits use Arduino NANO w/ ATmega328 chip)
- A USB cable is required to connect the NANO microprocessor to your computer for programming



## Suggested Reading

If you're new to Arduino in general, it is easy to find many tutorials and code to get you started along with the example code included in the Arduino software and the [DuinoKit.com](#) "Show and Tell" forum. Don't be afraid to Google "Arduino \_\_\_\_\_" and look through the results. There is a lot of good information available with online resources.

## Windows 8, 7, Vista, and XP

- Go to the Arduino [download page](#) and download the latest version of the Arduino software for Windows.
- When the download is finished, un-zip it and open up the Arduino folder to confirm that yes, there are indeed some files and sub-folders inside. The file structure is important so don't be moving any files around unless you really know what you're doing.
- Power up your Arduino by connecting your Arduino board to your computer with a USB cable (or FTDI connector if you're using an Arduino pro). You should see the an LED labeled 'ON' light up. ([this diagram](#) shows the placement of the power LED on the UNO).
- If you're running Windows 8, you'll need to disable driver signing, so go see the Windows 8 section. If you're running Windows 7, Vista, or XP, you'll need to install some drivers, so head to the Windows 7, Vista, and XP section down below.

## Windows 8

Windows 8 comes with a nice little security 'feature' that 'protects' you from unsigned driver installation. The Arduino Uno (but NOT the SparkFun RedBoard) comes with unsigned drivers, so in order to use your Uno, you'll have to tell Windows to disable driver signing.

To *temporarily* disable driver signing:

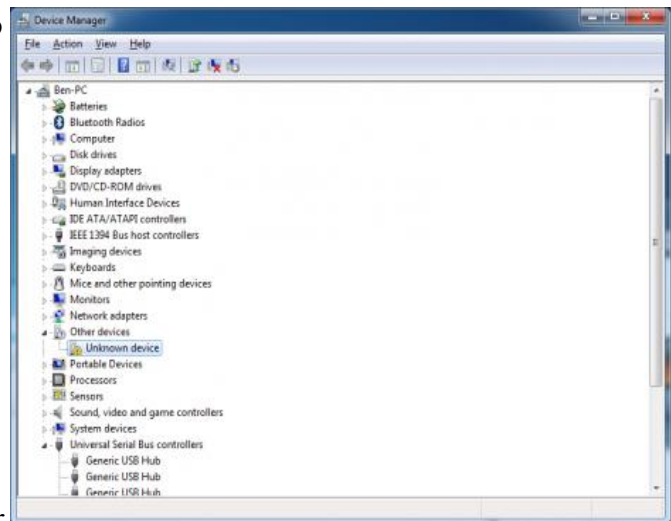
- From the Metro Start Screen, open Settings (move your mouse to the bottom-right-corner of the screen and wait for the pop-out bar to appear, then click the Gear icon)

- Click ‘More PC Settings’
- Click ‘General’
- Scroll down, and click ‘Restart now’ under ‘Advanced startup’.
- Wait a bit.
- Click ‘Troubleshoot’.
- Click ‘Advanced Options’
- Click ‘Windows Startup Settings’
- Click Restart.
- When your computer restarts, select ‘Disable driver signature enforcement’ from the list.

## Windows 7, Vista, and XP

Installing the Drivers for the Arduino NANO w/ ATmega328 (from Arduino.cc)

- Plug in your board and wait for Windows to begin its driver installation process
- After a few moments, the process will fail, despite its best efforts
- Click on the Start Menu, and open up the Control Panel
- While in the Control Panel, navigate to System and Security. Next, click on System
- Once the System window is up, open the Device Manager
- Look under Ports (COM & LPT). You should see an open port named “Arduino UNO (COMxx)”. If there is no COM & LPT section, look under ‘Other Devices’ for ‘Unknown Device’
- Right click on the “Arduino... (COMxx)” or “Unknown Device” port and choose the “Update Driver Software” option
- Next, choose the “Browse my computer for Driver software” option
- Finally, navigate to and select the “Drivers” folder of the Arduino Software download.



You can select the ‘drivers’ folder with the ‘search sub-folders’ option selected.

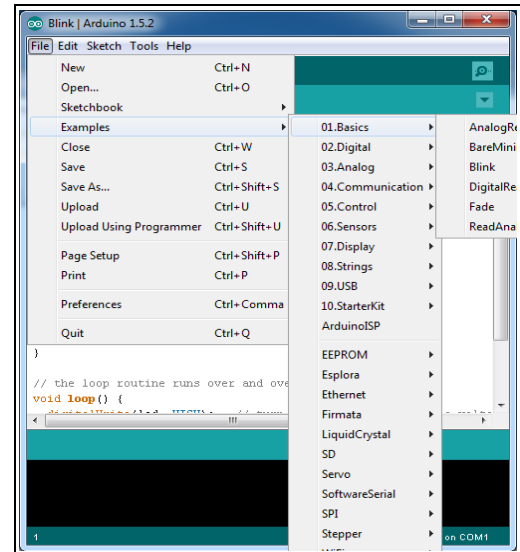
- Windows will finish up the driver installation from there.

- NOTE (On some systems you may need to “install” additional drivers).  
Check again in the Device Manager and look for and repeat the above step if necessary.

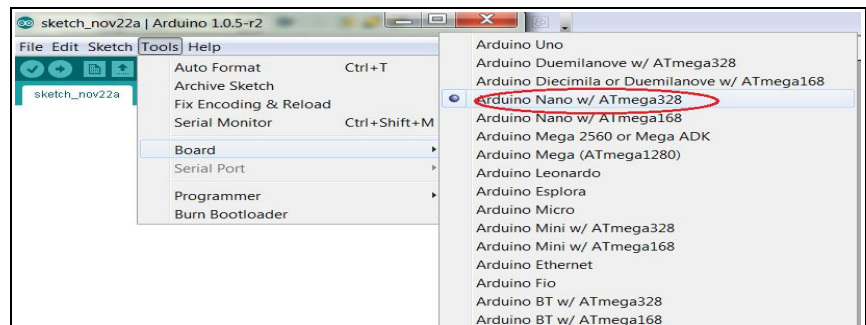
## Launch and Blink!

After following the appropriate steps for your software install, we are now ready to test your first program with your Arduino board!

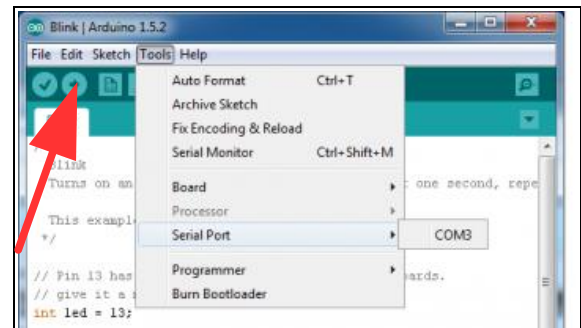
- Launch the Arduino application
- If you disconnected your board, plug it back in
- Open the Blink example sketch by going to: File > Examples > 1.Basics > Blink



- Select the type of Arduino board you're using: Tools > Board > NANO w/ ATmega328



- Select the Serial/COM port that your Arduino is attached to: Tools > Serial Port > COMxx
- If you're not sure which serial device is your Arduino, take a look at the available ports, then unplug your Arduino and look again. The one that disappeared is your Arduino.
- With your Arduino board connected, and the Blink sketch open, press the 'Upload' button



- After a second, you should see some LEDs flashing on your Arduino, followed by the message 'Done Uploading' in the status bar of the Blink sketch.
- If everything worked, the onboard LED on your Arduino should now be blinking! You just programmed your first Arduino!
- Can you look through the “Blink” code and find/change setting for the timing of the LED?

*Now move onto “Show and Tell” section of the DuinoKit.com website for additional instructions and program examples. There is also a HUGE collection of programs, examples and tutorials available online with just a little searching.*

## Troubleshooting

If you are having trouble, please search for information or tutorials online. We also offer the “Show and Tell” forum for DuinoKit users. Since the Arduino is a open-source microprocessor there are countless examples and and tutorials available.

## Mac Users

This page will show you how to install and test the Arduino software on a Mac computer running OSX.

- Go to the Arduino [download page](#) and download the latest version of the Arduino software for Mac.
- When the download is finished, un-zip it and open up the Arduino folder to confirm that yes, there are indeed some files and sub-folders inside. The file structure is important so don't be moving any files around unless you really know what you're doing.
- Power up your Arduino by connecting your Arduino board to your computer with a USB cable (or FTDI connector if you're using an Arduino pro). You should see the an LED labeled 'ON' light up. ([this diagram](#) shows the placement of the power LED on the UNO).
- Move the Arduino application into your Applications folder.

## FTDI Drivers

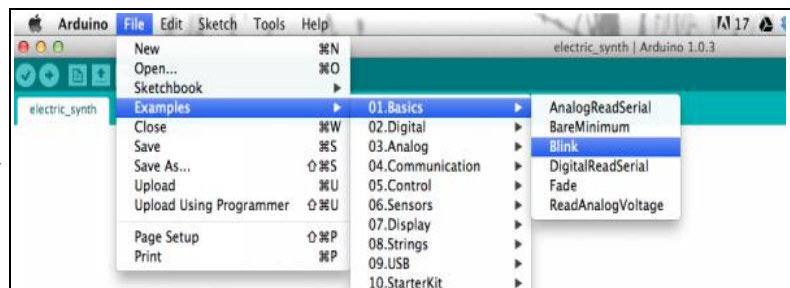
If you have an UNO, Mega2560, or Redboard, you shouldn't need this step, so skip it!

- For other boards, you will need to install drivers for the FTDI chip on your Arduino.
- Go to the [FTDI website](#) and download the latest version of the drivers.
- Once you're done downloading, double click the package and follow the instructions from the installer.
- Restart your computer after installing the drivers.

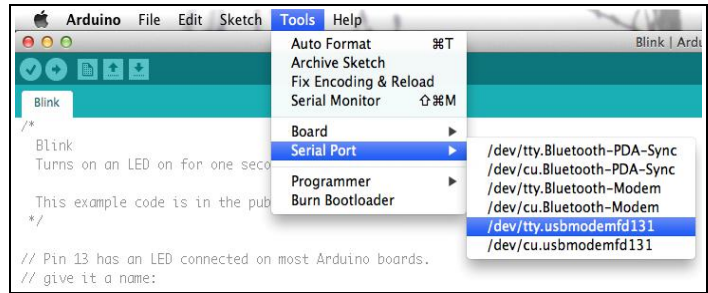
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- Launch the Arduino application
- If you disconnected your board, plug it back in
- Open the Blink example sketch by going to: File > Examples > 1.Basics > Blink



- Select the type of Arduino board you're using: Tools > Board > NANO w/ ATmega328
- Select the serial port that your Arduino is attached to: Tools > Port > xxxxxx (it'll probably look something like "/dev/tty.usbmodemfd131" or "/dev/tty.usbserial-131" but probably with a different number)



- If you're not sure which serial device is your Arduino, take a look at the available ports, then unplug your Arduino and look again. The one that disappeared is your Arduino.
- With your Arduino board connected and the Blink sketch open, press the 'Upload' button
- After a second, you should see some LEDs flashing on your Arduino, followed by the message 'Done Uploading' in the status bar of the Blink sketch.
- If everything worked, the onboard LED on your Arduino should now be blinking! You just programmed your first Arduino!
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***Technical assistance and inquiries:***

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