

Getting Start Guide

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Arduino IDE (Integrated Development Environment)

Introduction

The Arduino Software (IDE) is easy-to-use for beginners, yet flexible enough for advanced users to take advantage of as well. For teachers, it's conveniently based on the Processing programming environment, so students learning to program in that environment will be familiar with how the Arduino IDE works.

Install the Arduino Software (IDE)

Introduction


The following method is based on the windows PC installation environment.

If it is the other system, please refer to this link:

<https://www.arduino.cc/en/Guide/HomePage>



Download the Arduino Software



ARDUINO 1.6.12

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.

Select Operating System

- 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 \(sha512\)](#)

Support the Arduino Software

Consider supporting the Arduino Software by contributing to its development. (US tax payers, please note this contribution is not tax deductible). [Learn more on how your contribution will be used.](#)



SINCE MARCH 2015, THE ARDUINO IDE HAS BEEN DOWNLOADED **10,248,239** TIMES. (IMPRESSIVE!) NO LONGER JUST FOR ARDUINO AND GENUINO BOARDS, HUNDREDS OF COMPANIES AROUND THE WORLD ARE USING THE IDE TO PROGRAM THEIR DEVICES, INCLUDING COMPATIBLES, CLONES, AND EVEN COUNTERFEITS. HELP ACCELERATE ITS DEVELOPMENT WITH A SMALL CONTRIBUTION! REMEMBER: OPEN SOURCE IS LOVE!

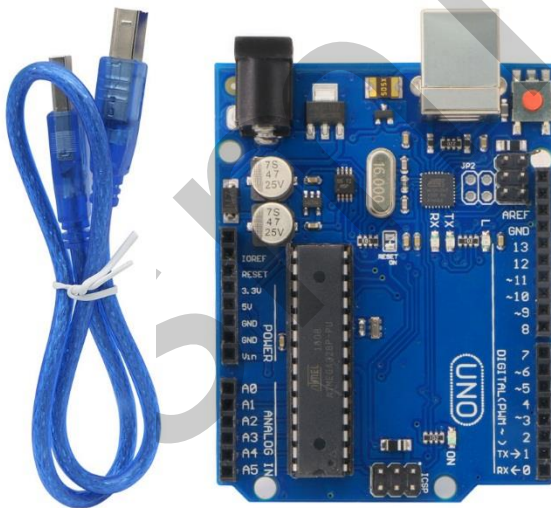
\$3 \$5 \$10 \$25 \$50 OTHER

Click it 

JUST DOWNLOAD CONTRIBUTE & DOWNLOAD

Step 1: Get an Uno R3 and USB cable

In this tutorial, you're using an Uno R3. You also need a standard USB cable (A plug to B plug): the kind you would connect to a USB printer, for example.

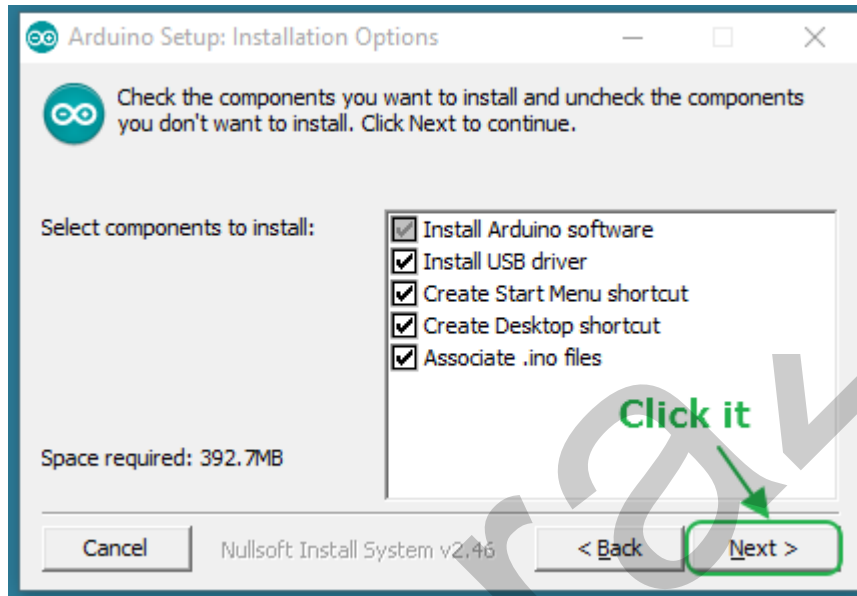


Step 2: Install the Arduino Software (IDE)

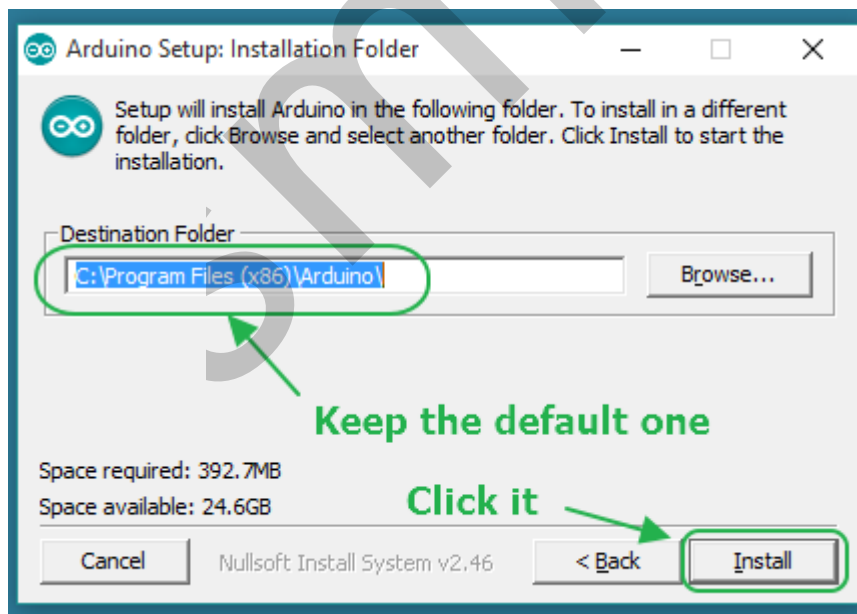
You need to open **Public_materials File ->Software File** and Double-click the arduino-1.6.9-windows.exe or you can direct download the latest version from this page:

<http://arduino.cc/en/Main/Software>

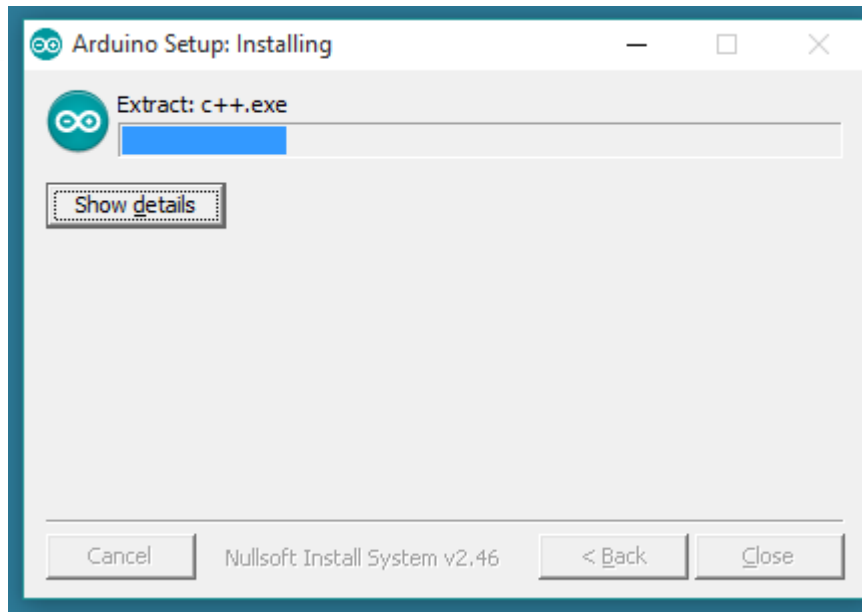
Next, proceed with the installation and please allow the driver installation process.



Choose the components to install and click “next” button.



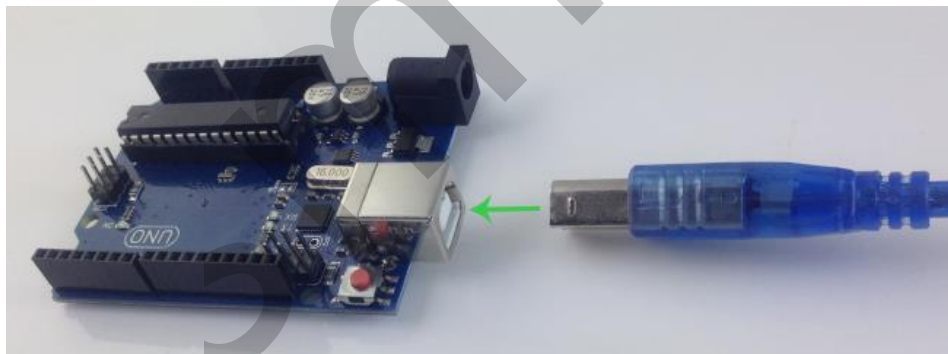
Choose the installation directory (we suggest to keep the default one)



The process will extract and install all the required files to execute properly the Arduino Software (IDE)

Step 3: Connect the board

The USB connection with the PC is necessary to program the board and not just to power it up. The Uno and Mega automatically draw power from either the USB or an external power supply. Connect the board to your computer using the USB cable. **The green power LED (labelled PWR) should go on.**



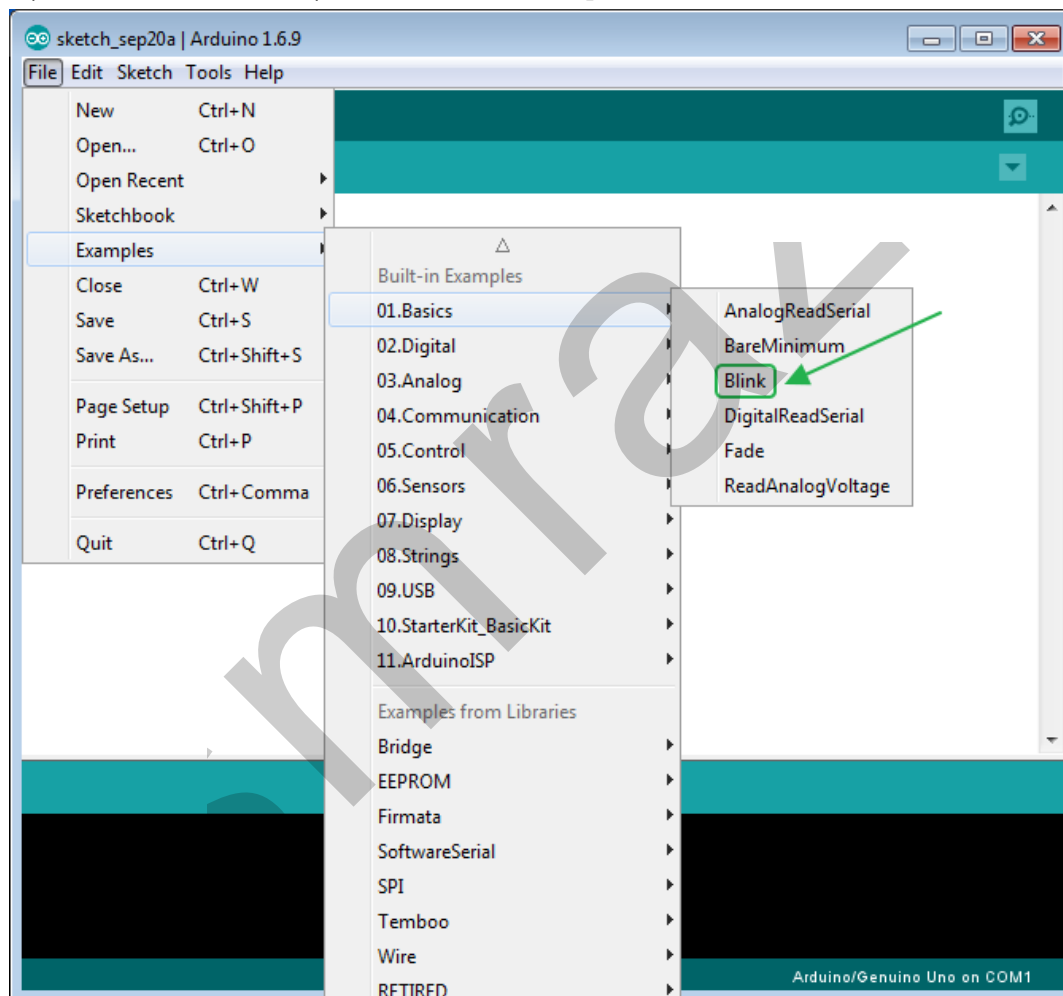
Step 4: Launch the Arduino Software (IDE)

Double-click the Arduino icon (arduino.exe) created by the installation process.



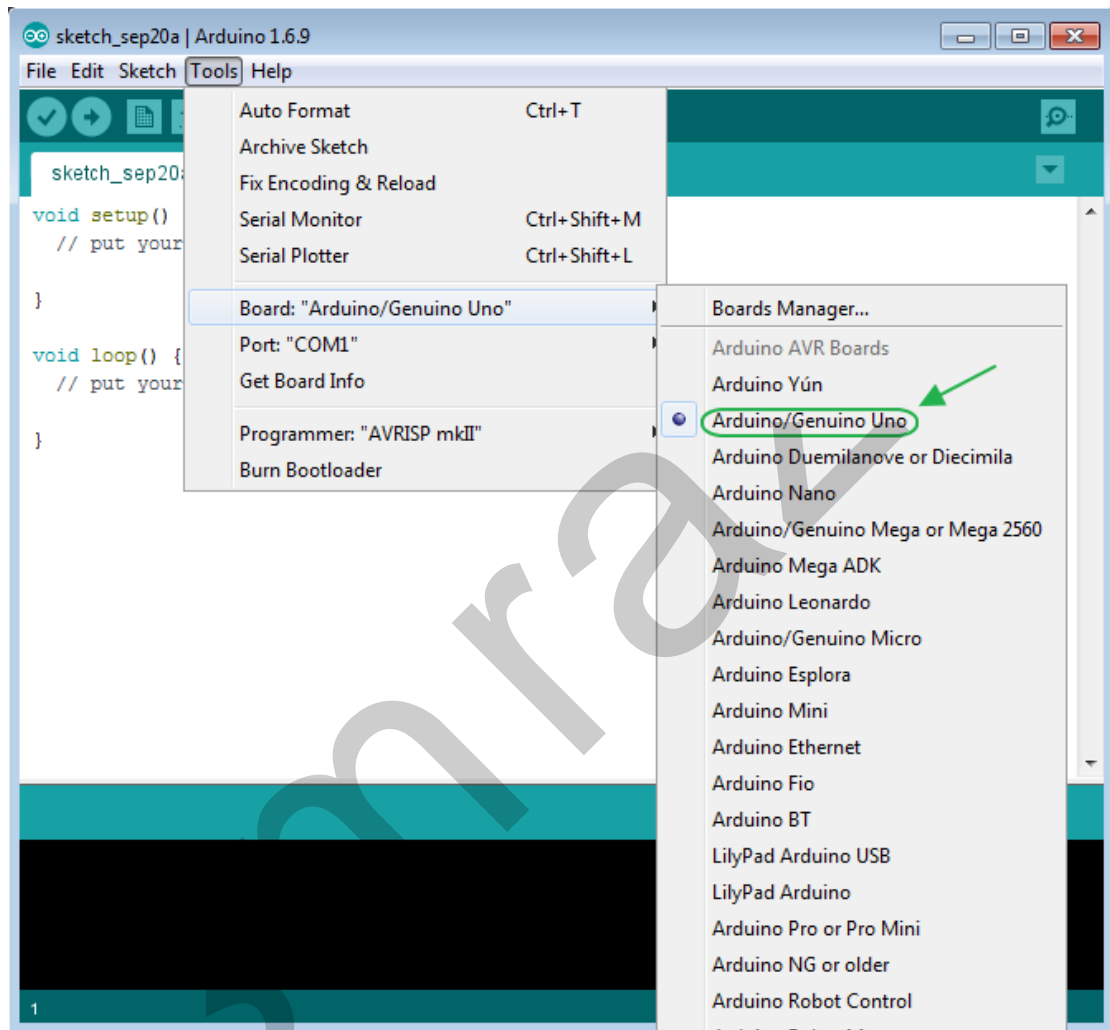
Step 5: Open the blink example

Open the LED blink example sketch: File > Examples > 01.Basics > Blink.



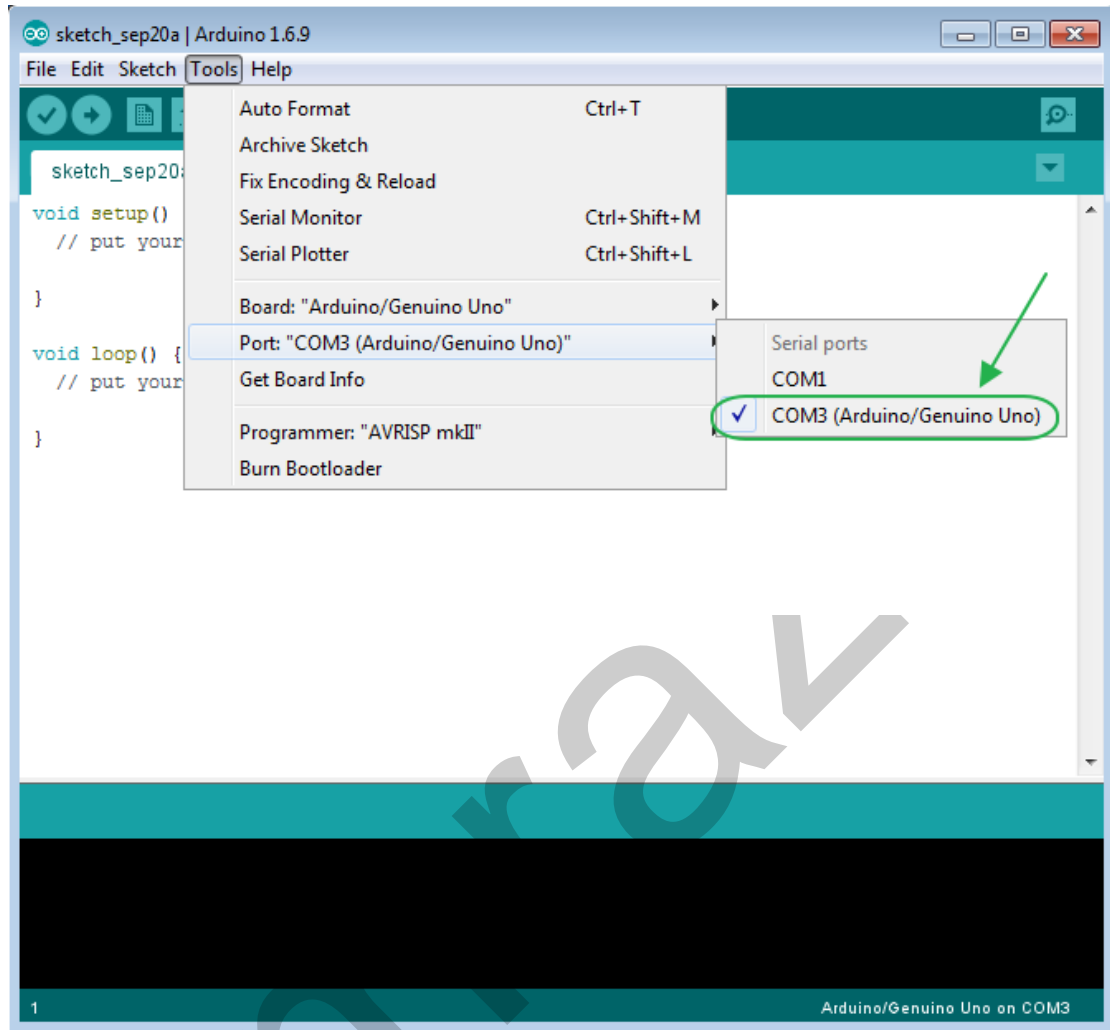
Step 6: Select your board

You'll need to select the entry in the Tools > Board menu that corresponds to your Arduino board.



Selecting an Arduino/Genuino Uno.

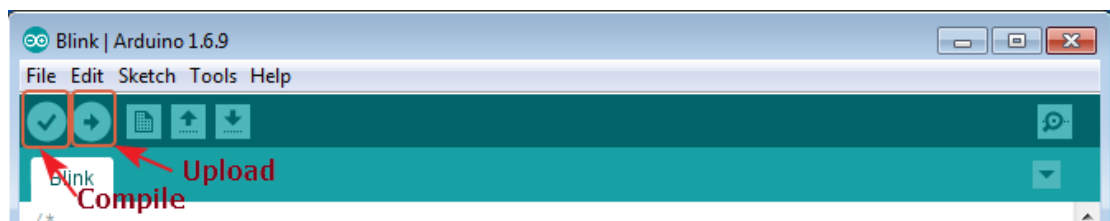
Step 7: Select your serial port



Select the serial device of the board from the Tools | Serial Port menu. This is likely to be COM3 or higher (COM1 and COM2 are usually reserved for hardware serial ports). To find out, you can disconnect your board and re-open the menu; the entry that disappears should be the Arduino board. Reconnect the board and select that serial port.

Step 8: Upload the program

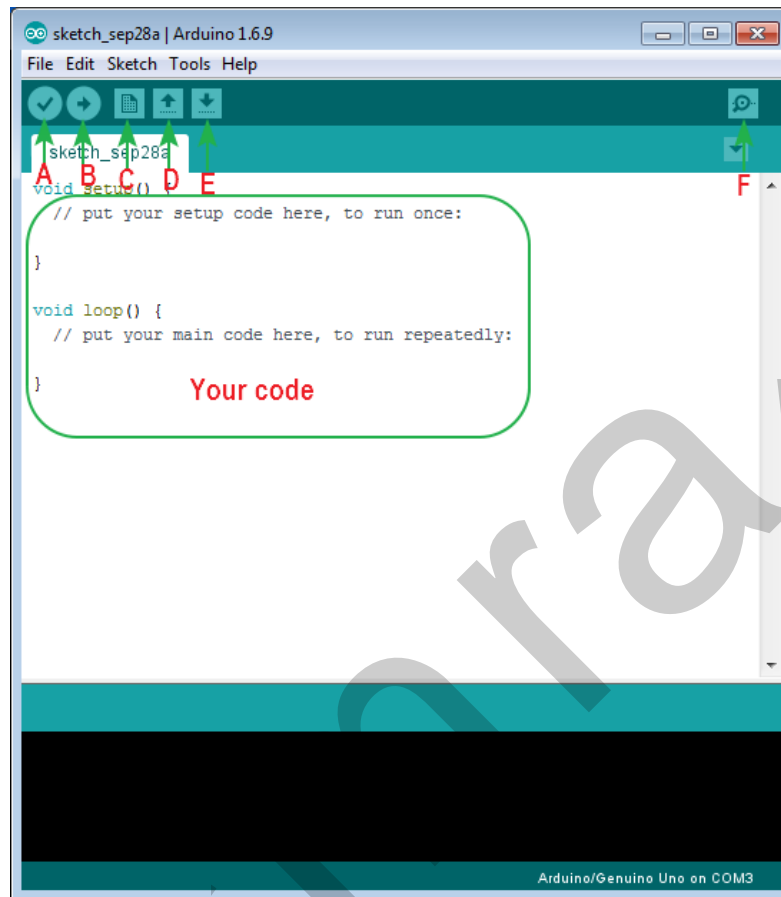
Now, simply click the "Upload" button in the environment. Wait a few seconds - you should see the RX and TX leds on the board flashing. If the upload is successful, the message "Done uploading." will appear in the status bar.



Step 9: Result

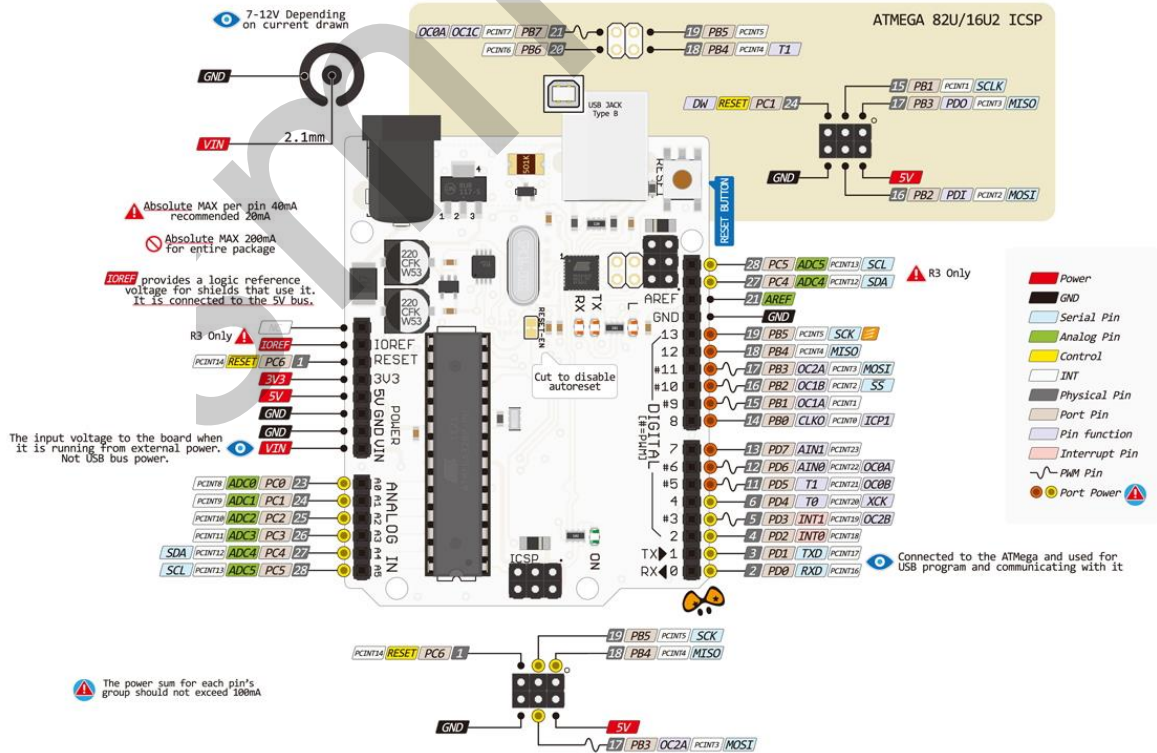
A few seconds after the upload finishes, you should see the pin 13 (L) LED on the board start to blink (in orange). If it does, congratulations! You've gotten Arduino up-and-running.

Arduino interface introduction



- A ->Compile
- B ->Upload
- C ->New
- D ->Open
- E ->Save
- F ->Serial monitor

Arduino UNO R3 hardware introduction



Learning materials

Lessons

Lesson1-LED blink	24/09/2016 16:29	File folder
Lesson2-LED trailing effects	24/09/2016 16:30	File folder
Lesson3-Traffic light	24/09/2016 16:30	File folder
Lesson4-Analog Input	27/09/2016 17:14	File folder
Lesson5-Fading	24/09/2016 16:31	File folder
Lesson6-Button	24/09/2016 16:31	File folder
Lesson7-Responder experiment	24/09/2016 16:31	File folder
Lesson8-Active buzzer	24/09/2016 16:32	File folder
Lesson9-Passive buzzer	22/09/2016 17:21	File folder
Lesson10-RGB LED	24/09/2016 16:32	File folder
Lesson11-Making Sounds	26/09/2016 19:52	File folder
Lesson12-Analog temperature	24/09/2016 16:33	File folder
Lesson13-Tilt switch	24/09/2016 16:33	File folder
Lesson14-Eight LEDs and a Shift Register	26/09/2016 15:46	File folder
Lesson15-4 digit LED Segment Displays	26/09/2016 15:02	File folder
Lesson16-Heart-shaped display experime...	26/09/2016 20:34	File folder
Lesson17-Sweep	26/09/2016 19:51	File folder
Lesson18-Knob	26/09/2016 20:15	File folder
Lesson19-DHT11	27/09/2016 18:49	File folder
Lesson20-LCD1602	27/09/2016 18:07	File folder
Lesson21-Temperature and humidity mo...	27/09/2016 18:21	File folder

Introduction







We will provide you not only the all involved courses about this kit but also to analyze each course. We sincerely hope that you can learn from the first course to the last course because it will lead you start with Arduino step by step, and it also let you jump from a newbie to a higher level for developing your own independent projects.

Ebook

Introduction

The E-book about Arduino what we provided for you is carefully selected and comprehensive, it specially aims at solving the problems when you making projects such as syntax analysis, program optimization and so on. If you have any questions about the projects what we provided, you can also refer the content of e-books or email us: Email: support@smraza.com
Web: www.smraza.com

Path: \Public_materials\Ebook

n > Public_materials > Ebook				Search Ebook
Name	Date modified	Type	Size	
 Arduino book.pdf	05/09/2016 18:11	Foxit Reader Plus ...	4,496 KB	
 Beginning Arduino Programming.pdf	05/09/2016 18:19	Foxit Reader Plus ...	32,373 KB	
 Language reference for Arduino V1.0.pdf	03/09/2016 10:43	Foxit Reader Plus ...	4,685 KB	
 Practical Arduino.pdf	05/09/2016 18:14	Foxit Reader Plus ...	6,417 KB	
 Python Programming for Arduino.pdf	05/09/2016 18:13	Foxit Reader Plus ...	10,272 KB	
 ReadMe.docx	27/09/2016 19:07	Microsoft Word D...	353 KB	

Learning Websites

introduction

If you think these learning projects boring or not vivid enough, don't worry about that. We will continue to collect some Arduino websites, forums and video courses. At the same time, we are also building our own website, forums and video courses which can lead you into the Arduino funny world better.

Projects or Lessons:

<http://forum.arduino.cc/>

<https://www.arduino.cc/en/Tutorial/HomePage/>

<http://www.toptechboy.com/arduino-lessons/>

<https://create.arduino.cc/projecthub/>

Video tutorials:

https://www.youtube.com/watch?v=fCxA9_kg6s&list=PLA567CE235D39FA84

https://www.youtube.com/watch?v=d8_xNcGYgo&list=PLGs0VKk2DiYx6CMdOQR_hmJ2NbB4mZQn-

Language Reference:

<https://www.arduino.cc/en/Reference/HomePage/>

<http://wiring.org.co/reference/>