

## Getting Started with Clyde

# Software

Most lamps found in hardware stores consist mainly of hardware. You turn them on, you turn them off. If you're lucky, you get a dimmer. Not so with Clyde! While you get the above, you can get a lot more too! That's due to a combination of hardware and software, usually not found in lamps.

Clyde is the Arduino-compatible lamp designed to be tinkered with and modified to fit your needs, so let's get tinkering! In this article you will learn to set up your computer to play with the Clyde software. You will also learn how to return Clyde to factory settings. Being able to get back to factory settings no matter what frees you to experiment to your heart's content, as you can always go back to your starting point.

### The Clyde Firmware

The Clyde firmware (its specialized software) is the program that resides in Clyde's memory. It is divided into two parts: library and sketch. To change Clyde's behavior we will reprogram that firmware using the Arduino integrated development environment (IDE). The Arduino IDE (<http://arduino.cc/en/Guide/Environment>) is the application used to program Arduino boards, and since Clyde is Arduino compatible it can be used to program Clyde too.

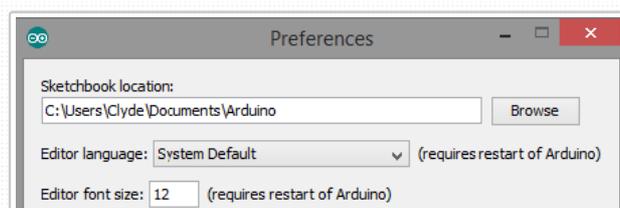
## Installing Arduino IDE on Your Computer

First things first, let's download the Arduino IDE. Arduino IDE has 2 versions: 1.0.5 and 1.5.7 Beta. We recommend 1.0.5 (<http://arduino.cc/en/Main/Software#toc2>), but support both versions. Choose the correct version for your operating system. Installers are provided for Windows and Mac, and the source code is provided for download should you ever need it. Head on over to Arduino's site and follow the detailed installation instructions: <http://arduino.cc/en/Main/Software>

## Installing Clyde Firmware on Your Computer

### 1. Preparation

Software meant for an Arduino board are called sketches. The place where all sketches are kept is called a **sketchbook**. The Arduino IDE created this folder for you during installation. On Windows it is usually called "My Documents\Arduino\" and on Mac, "Documents/Arduino\". Should you need to confirm where your sketchbook is, you can go to File > Preferences to see where your own sketchbook has been created. It will be listed at the top of the Preferences window. Make a note of where your sketchbook is, as you will refer to it later on. Close the Arduino IDE for now.



### 2. Download Clyde Firmware

You have a choice for the firmware. You can either download a beginner-friendly file from our servers, or get the full package from GitHub. The beginner-friendly file contains

all the files you'll need to reset Clyde to factory-settings using Arduino 1.0.5.

#### **Beginner-Friendly download:**

The easiest way to get started is to download all the necessary files as a zip.

[DOWNLOAD ClydeSoftware.zip](#)

Once the download is complete, uncompress the file "ClydeSoftware.zip". It should contain a folder called ClydeSoftware. Look inside, all the Clyde firmware files sorted in specialised folders: drivers, hardware and libraries.

#### **GitHub download:**

If you are comfortable with GitHub, head over to our repository:

<https://github.com/fabule/Clyde>. You will find some basic installation instructions in the README.

### **3. Installing Drivers**

**On Macintosh**, no drivers are necessary, jump to the next section.

**On Windows** you will need to install the Clyde drivers. We provided signed drivers for 32-bit and 64-bit. They are found in ClydeSoftware/drivers/. Double-click the driver that matches your needs.

### **4. Installing Clyde Libraries**

The Clyde firmware needs 3 libraries: Clyde, SerialCommand and MPR121. These libraries are provided to you in the file you downloaded, ClydeSoftware. You can find them in "libraries" folder. Place each of those folders, "Clyde", "SerialCommand" and "MPR121", inside your sketchbook "libraries" folder. This contains the majority of the code that controls Clyde. If you need more help installing Arduino libraries, you can find instructions here: <http://arduino.cc/en/Guide/Libraries>

### **5. Installing Clyde as Arduino Device**

The Arduino IDE has to be told it will be working with Clyde. This step will add Clyde as a device under the "Tools > Board menu".

If you do not have a "hardware" folder in your sketchbook, then place the "hardware" folder inside your sketchbook folder.

If you already have a "hardware" folder in your sketchbook, then add the "fabule" folder inside the ClydeSoftware/hardware/.

At this point, you should have two folders in your sketchbook:

1. hardware
2. libraries

### **6. Connecting Clyde to Your Computer**

Connect Clyde to your computer using the mini USB cable. The Micro-B plug connects to Clyde

and the USB Standard A plug plugs into a USB 2.0 port (the black ones) on your computer. Note: USB 3.0 ports (the blues ones) are not compatible with Arduino Leonardo thus not compatible with Clyde either.



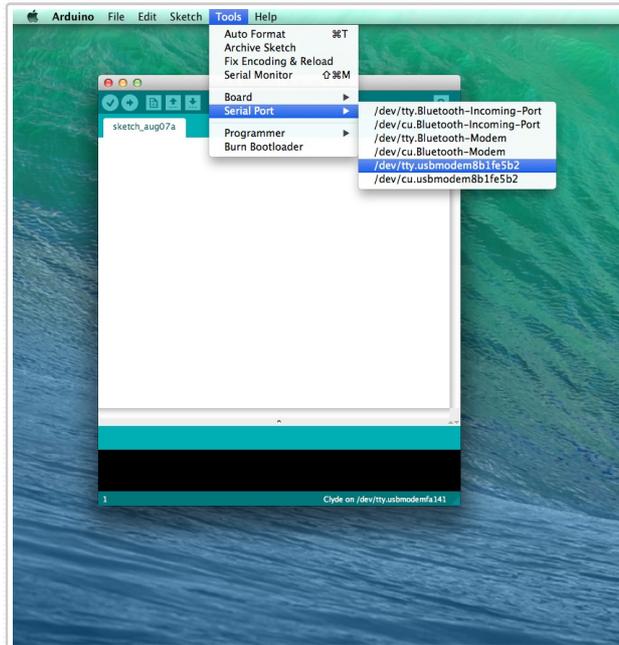
When Clyde is plugged in, the green light will turn on and the amber light will flash once.

Start the Arduino IDE for the following steps.

## 7. Port Selection

### On Mac:

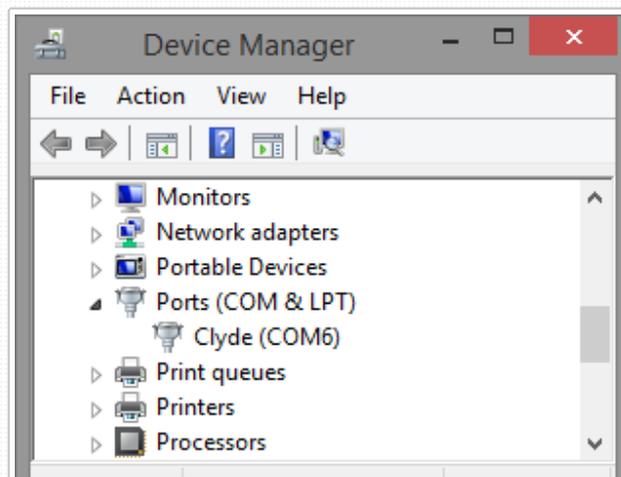
Once Clyde is plugged in, in Arduino IDE menu, navigate to Tools > Serial Port > select the port that begins with /dev/cu.usbmodem or /dev/tty.usbmodem.



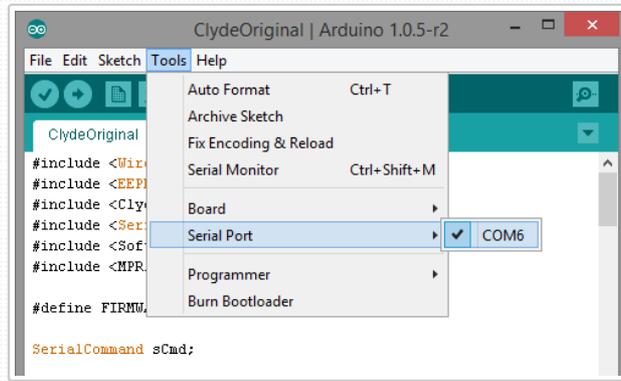
### On Windows:

Once Clyde is plugged in, open the Device Manager. To find it, search for "Device Manager" in the Windows Start Screen search box on Windows 8 or in the Start Search box on Windows 7.

In the Device Manager, look at the "Ports (COM & LPT)" section. You should see Clyde there alongside the port number that he is on. In this picture, Clyde is on COM6.



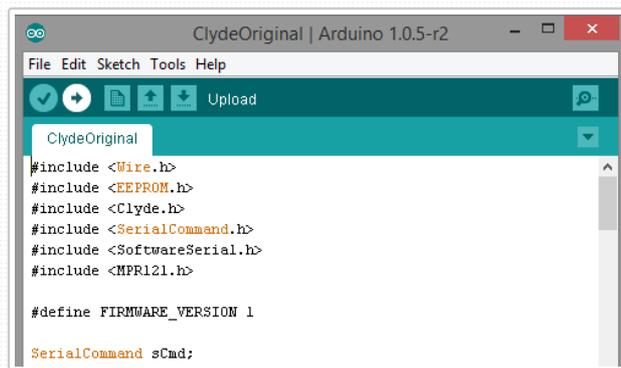
Now go select that port number in Arduino IDE (Tools > Serial Port).



## 8. Uploading Clyde Firmware

At this point, you are finally ready to compile and upload Clyde's firmware !

Open the "ClydeOriginal" sketch in your Arduino IDE. In order to do this, start the Arduino IDE. In its menu bar, select "File > Examples > ClydeOriginal". The ClydeOriginal sketch will open in a new Arduino window. Select Clyde under the "Tools > Board" menu of the new window, and the port assigned to Clyde under "Tools > Serial" Port. Press "Upload" button (blue sideways arrow), and the firmware should compile and upload into Clyde. The "Upload" button will turn yellow as per the image to the right as it's uploading. And voilà! Clyde is back to factory settings!



Now that you're able to restore Clyde to its original state, it's time to start hacking. You can change Clyde's behaviour to your heart's content. Stay tuned for upcoming tutorials.

## Downloads

Clyde Software: [ClydeSoftware.zip](#)  
Arduino 1.0.5: <http://arduino.cc/en/Main/Software#toc2>

## Further Reading

Arduino Development Environment: <http://arduino.cc/en/Guide/Environment>  
Arduino Libraries: <http://arduino.cc/en/Guide/Libraries>  
Arduino Troubleshooting Guide: <http://arduino.cc/en/Guide/Troubleshooting>

## About Fabule

Founded by designers, Fabule makes unique domestic devices with a lot of personality. We are committed to creating smart products that make you feel smart. You can easily open, upgrade, tinker with or repair anything we design, and make it truly yours.

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