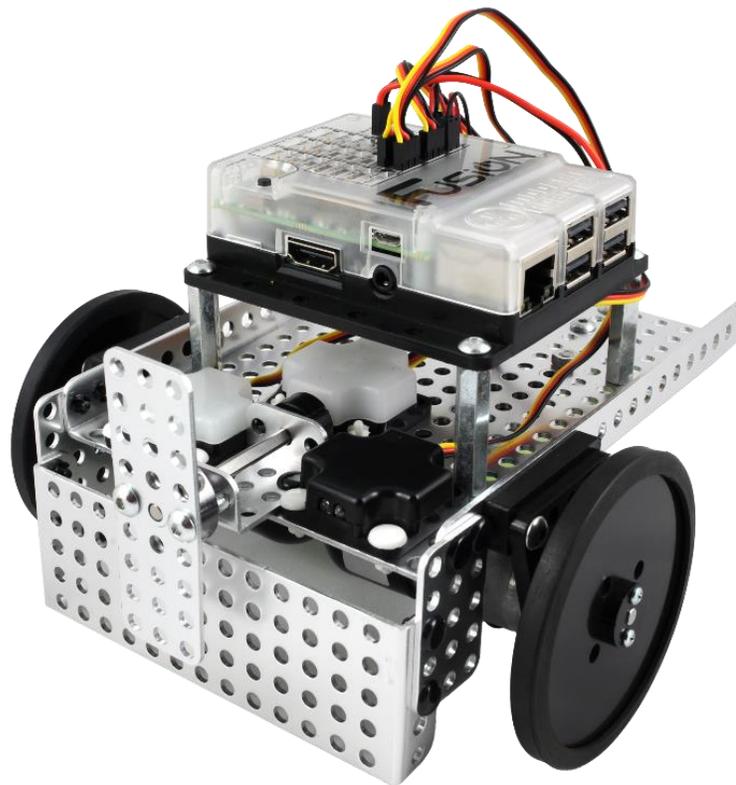




Mimio MyBot

Getting Started Guide

for Fusion-Based Robots



Version 1.5a
Boxlight Robotics



Getting Started – Connecting, Creating an Administrator Account, and Updating the Software

This section provides step-by-step instructions on getting started with the MyBot Fusion Controller. To access the online version of these instructions, please visit <http://boxlightrobotics.com/fusion>.

Getting Started - Connecting

1. Powering the Fusion Controller:

The Fusion Controller is powered by the supplied battery pack which should be charged before use.

To Charge the Battery:

- Plug the battery into the BATT connector on the Fusion Controller.
- Plug the Battery Charger into a suitable power outlet and connect the wire to the CHRГ connector of the Fusion Controller. The BLACK wire must be to the right when the word Fusion is facing you.
- Allow 9-12 hours to fully charge the battery. Use the LED indicator as a guide to charge status.

Charging Notes:

- ✓ The battery will only charge if the Fusion is OFF.
- ✓ Only the approved charger should be used to charge the battery.

Powering the Internal Processor via USB:

While the robot will only work when being powered from the battery, you can power the computer inside the Fusion Controller through the microUSB Port on the side of the panel of the unit.

- Connect the USB cable supplied with your Fusion Controller kit to a USB Port on your computer or a suitable USB Power Supply. Connect the other end to the microUSB Port on the side of the Fusion Controller. *A green LED near this connector will light when power is connected.*
- This will only power the computer allowing you to access the User Interface; it will not power motors, servos, or other devices connected to the Fusion.

USB Power Troubleshooting Notes:

- ✓ The Fusion requires a source capable of supplying 5v at 1000mA (1 Amp). Some computers may not be able to supply this power.
- ✓ Power received via the USB Port **will not** charge the Fusion's Battery pack.
- ✓ If the RED LED on the back end of the Fusion Controller (near the PWR Button) flashes or goes out during USB Powered operation, your USB Source is not able to provide sufficient power. *It is not recommended to operate under these conditions.*

2. Turning on the Fusion Controller:

Press the PWR Button on the Unit. A green LED that is roughly under the letter 'o' in the Fusion logo will begin to flash slowly. This indicates that the controller is booting up. When the LED lights solid, the Fusion is ready to use.

Getting Started – Connecting (continued)

3. Connecting to the Fusion Controller:

On your computer, activate the WiFi and look for the Wireless Network being generated by the Fusion Controller. The Network's name will look like **FusionAP_XXXXXX**. You can see the actual network name (known as the SSID) on a label on the side of the Fusion Controller and also on the inside lid of the Fusion Controller Box. Select this network and enter the case sensitive passkey **mrifusion**. Once the network is connected you are ready to open the Fusion's user interface.

Important: If you have any other network connections on this computer – especially WIRED connections – you should disconnect them to prevent communication problems.

4. Opening the Fusion's User Interface:

Open the Browser on your computer (Google Chrome or Microsoft Edge is recommended). Enter the URL **my.bot** and press Enter. After a few moments, the Fusion's Login Page should be displayed.

Trouble-shooting Tips:

- If the computer says it cannot find the **my.bot** URL, it suggests that you still have another active network connection, or that security software may be preventing proper address resolution. Please try the following:
- Instead of the **my.bot** URL, enter the address: **http://192.168.50.1:8080** and press enter.
- If connection is established using this URL, it confirms that you either have another active network connection or security software is preventing proper address resolution.
- If the direct address entry does not access the Fusion's Login Page, there may be other problems with your connection or security software. Contact your network administrator for assistance.

The screenshot displays the Mimio MyBot login page. On the left, a red-bordered box highlights the 'FUSION' login dialog with fields for Username and Password, a 'Show password' toggle, and 'REGISTER' and 'LOGIN' buttons. Below this box are links for 'GUEST LOGIN' and 'FORGOT YOUR PASSWORD?'. A red arrow points from the 'FORGOT YOUR PASSWORD?' link to a registration form on the right. The registration form is divided into 'Required Fields' (Username, Password, Confirm Password, User Group, Security Question, Security Answer) and 'Optional Fields' (Email, First Name, Last Name, Language). A red note states: 'You can create one admin account using self-registration.' At the bottom right of the form are 'CANCEL' and 'CREATE' buttons. At the bottom center, a red arrow points to the text 'Current Firmware Version Fusion - v1.4.1b'.

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Getting Started – Creating and Logging-in to an Administrator Account

1. On the Login Page, click REGISTER:

- ✓ This will allow you to self-register or create an account. There are two types accounts on the Fusion Controller: USER accounts and ADMIN accounts.
 - ✓ As these names suggest, the USER accounts are for users who are developing and running programs for the Fusion. Each user account has its own private storage space for programs that is not accessible to other users. The USER accounts cannot access any of the Fusion Management features such as account management and password changes, configuring the networking features, and updating the firmware.
 - ✓ The ADMIN account has access to all of the features of the Fusion Controller as well as developing programs stored in the Admin's private storage.
 - ✓ You should have at least one ADMIN account for system management. While an Admin user can create additional ADMIN-type accounts from the user account management page, the Fusion allows for a single ADMIN Account to be created via the self-registration form.
- Complete the form, selecting ADMIN as the User Group type.
 - Click on CREATE to complete the account creation and login to the Fusion using the new Admin account.

The Fusion Home Page is displayed and shown below. Additional information about the home page features can be found by selecting the Fusion Documentation tile, then selecting the **Web Interface** tile from the Documentation Suite.

The screenshot shows the Mimio MyBot Home page. At the top left, there is a hamburger menu icon with a red arrow pointing to it and the text: **Open/Close Sidebar Menu:** Provides direct access to all Fusion capabilities without returning to the Fusion Home Page. The page header includes the text "Mimio MyBot | Home |" and system icons for language (EN), battery, signal, Wi-Fi, and power. The main content area features a "BOXLIGHT" logo and several tiles: "Build" (instructions for building a MyBot kit), "Blockly" (block based programming language), "Editor" (simple python programming environment), "Fusion Documentation" (full Fusion documentation and reference materials), "Data Logging" (collect and log data using sensors), "Settings" (change your Fusion's settings), and "Blockly Games" (a series of educational games that teach programming). Red arrows point to the "READ" button on the Fusion Documentation tile and the "LAUNCH" button on the Settings tile. Annotations for the Settings tile state: **Admin-Only System Settings:** This tile provides access to all Admin capabilities including network settings, user account management, and software updates.

Getting Started – Checking for and Updating the Fusion Software

1. Connect the Fusion Controller to the Internet:

(Note: Insure that the battery is fully charged or adequate USB Power is being provided before attempting a software update. Power failure during an update could require the return of your Fusion Controller for servicing.)

In order to check for and install a software update, the Fusion Controller must be connected to the Internet using a wired connection.

- Using a standard CAT5-type Ethernet Cable, connect the Fusion's Ethernet port to a suitable router/switch port on your network.
- The Fusion should automatically request and obtain an IP Address from your network and connect to the Internet.
- Observe the Internet Status Indicator on the Fusion's title bar. When internet access has been made, the icon will change from  to 

Note: When the Fusion Controller is connected to the Internet, it acts like a mini-router and provides that internet access to the WiFi network it creates. Thus, internet requests from the computer connected to the Fusion's WiFi will automatically forward to the internet

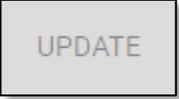
2. Check for Software Update:

- Open the **SETTINGS** tile from the Fusion Home Page, then select the SOFTWARE sub-page. If there is a software update available, the UPDATE button on the upper right of the screen will be green. If no update is available, the button will be gray:

Update Available



Update NOT Available



3. If an Update is Available, Click the UPDATE Button to Begin:

- The Fusion will start the update process. It may ask if you are sure you want to do the update before proceeding.
- During the process, it will put some progress messages on the screen. It may pause for what seems like a long time but it is still working.
- When the update is complete, the unit will either reboot or turn itself off pending on the requirements for that update. If it does shut down, simply repower the unit and allow it to start. You will be running the new version of software.

Special Note: What to do if your unit does not show an update available:

This may be normal, since you may already have the most current version of the software. The bottom right corner of the login screen shows what version you are running.

There is a problem on some units running versions from 1.4.0 to and including 1.5.0 where the update check mechanism does not always detect an available update.

If your unit is running one of these versions and your Fusion is connected to the internet (as indicted by the Internet Status Indicator), but it has not detected an update after about 2 minutes, please follow the procedure found on the following page. This procedure manually triggers the update detection process.

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MANUALLY TRIGGERING THE UPDATE DETECTION PROCESS:

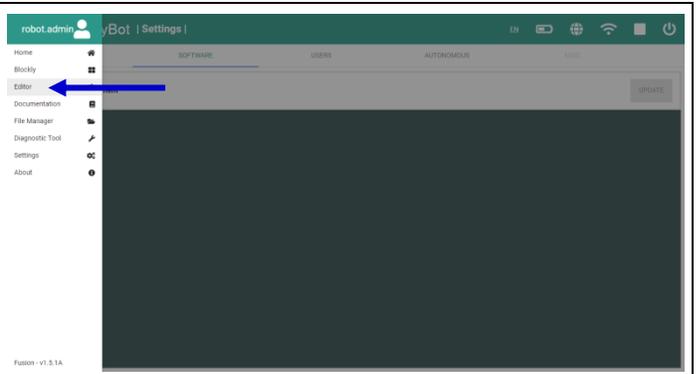
There is a problem on some units running versions from 1.4.0 to and including 1.5.0 where the update check mechanism does not always detect an available update.

If your unit is running one of these versions, your Fusion is connected to the internet (as indicated by the Internet Status Indicator), but it has not detected an update after about 2 minutes, this procedure manually triggers the update detection process. **NOTE:** This procedure is **ONLY** required one time and only if your unit is running versions 1.4.0 to 1.5.0.

1. Launch the Python Editor:

Open the side-bar menu and select the Editor.

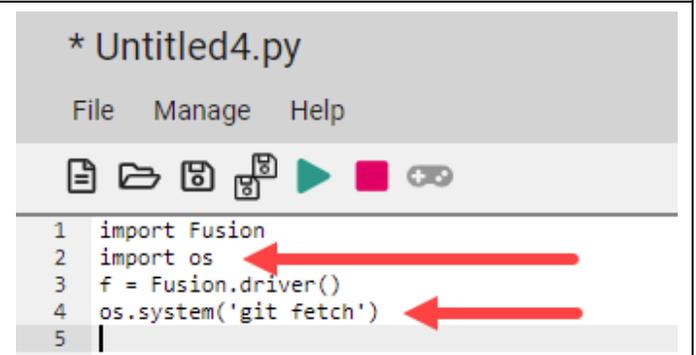
(You could also return to the Fusion home page and select the editor tile.)



2. Modify the Program:

Add two lines to the program template as shown:

```
import Fusion
import os
f = Fusion.driver()
os.system('git fetch')
```

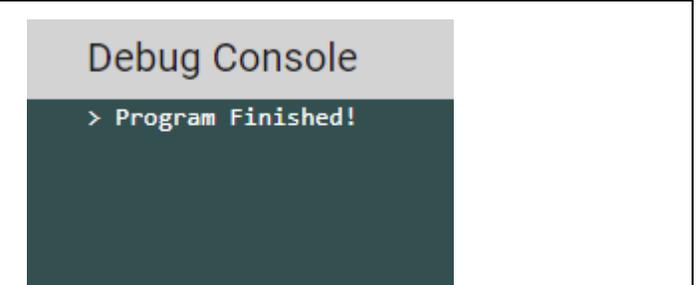


3. Run the Program:

Run the program by clicking the green arrow  on the tool bar.

The editor will ask you for a name (or use the Untitled.py name suggested). You can enter any name, but this procedure is a one-time process. Newer versions of the Fusion software have corrected the update detection process.

The program will run and may generate some lines of output in the Debug Console, ending with "> Program Finished".



4. Return to the Update Page:

The UPDATE button should show an available update within a minute if one is available.

