

How to access your Mirobot MB2 CCE

About your Mirobot

Your Mirobot communicates over a WiFi network only, which can either be provided by the robot itself, or by a WiFi router. If you have the option, then it is always best to use an existing internet-connected WiFi network because:

1. It reduces the power demand for the Mirobot's batteries.
2. It is more reliable.
3. It has longer range.
4. Many people can access it simultaneously.
5. You can add more Mirobots to the same network.
6. You can access all of the programming and control tools from the internet.

If you choose to use the Mirobot's own WiFi network, you will normally only have control through the built-in Mirobot UI (which will get boring).

Getting started

Whatever you choose, you need to start by accessing the Mirobot directly:

- Make sure the batteries are sufficiently charged - 4 x AA only.
- Twist the key-switch to the ON (green) position.
- Some lights will flash. After a few seconds you will notice the 'brain' is giving short double flashes, repeatedly - this is a good sign. The WiFi chip may also flash occasionally.

- Using a phone, tablet or computer, disconnect from your usual WiFi network and search for one named something like 'Mirobot-XXXX' where the Xs are numbers and letters. You could write down this letter/number combination - this is your Mirobot's name.
- Join the Mirobot network, and make sure to close all your browser tabs first.
- When it has connected, your computer may complain that it has no internet access - that's fine, it doesn't! Open a new tab in any modern internet browser, and type in the address bar:

192.168.4.1

The dots are important. Press enter, and a page will load - this is a website that is hosted by the Mirobot itself, and it contains some basic information, and controls.

Mirobot

You may begin playing with Mirobot's controls from here if you wish. When you want to see all the control possibilities, it's time to teach your Mirobot about your local WiFi network:

- In the top right of the page you will see two lines of green writing, to do with the state of the connection and WiFi.

✓ Connected to WiFi
✓ Connected to Mirobot

Click them, and a box will appear. Here you can teach your Mirobot about your existing WiFi network - you can select the network name from the dropdown box (it make take some time to list all the networks available) and then provide the password. Click save, and wait a moment for the connection to be established.

WiFi Client

STEMPhnomPenh ▼

Password:

IP Address: 0.0.0.0
MAC Address: 5c:cf:7f:06:ed:4f

WiFi Access Point

Access Point Name:

Channel: ▼

Encryption: ▼

- Close your internet browser completely, and disconnect from the Mirobot WiFi. You can rejoin your normal network again now.
- Wait until you have successfully rejoined your home network, then open a new browser tab. This time, you can navigate to:

local.mirobot.io

Again, the dots are important. When the page loads, you should see the same Mirobot control website, but now with an extra option, in the top middle, to try other Mirobot apps. Click it to try it.

Try Mirobot Apps!

(Note: if you have several Mirobots on the same network already, then it will give you a choice of which one to control).

- Now you have options to control the Mirobot with point and click, Blockly, Javascript, and many others.
- The mirobot will remember and automatically rejoin the last WiFi network for which you provided details after you turn the bot off and on again.

Blockly
This app allows more advanced programming techniques to be used to control Mirobot

Chrome App
Check out the standalone Chrome App which lets you run all of the apps from this site.

Javascript
Program Mirobot using the full power of Javascript directly from your browser

Mirobot UI
This is the built-in simple drag-and-drop app used to program Mirobot

Point & Click
Click to control Mirobot and see the program it would use

Python
Program Mirobot using the Python language from within your browser

Remote Control
Use buttons to directly remote control your Mirobot

Scratch
Use Scratch to program your Mirobot (requires Flash)

Snap!
Snap! is very similar to Scratch and is good for using the add-on sensors in code

Example code for the control applications is available at github.com/stemphnompenh/MB2CCE/snippets .

Common things to check if there are problems

- Correct network name and password?
- Is the battery properly charged?
- Are you connected to the same network that the Mirobot knows about?
- Does your WiFi network have internet access?
- Is the Mirobot in reasonable range of the WiFi router?

- Is the WiFi router free from any setting/policy that may restrict communication over the network between different devices?

Additional notes

The mirobot accepts instructions from your code or control inputs line-by-line: it requests the next instruction once it has completed the previous one. Because of this, there may be pauses between successive instructions, which can be up to a few seconds if your WiFi network has poor signal. In many cases, changing the location of the WiFi router will prevent long pauses. You can check the connection quality by looking at the WiFi symbol in the top right of the web-page at local.mirobot.io .

