

Happy birthday

Learning goals

In this lesson, we mainly learn how to control the color of RGB by micro:bit and Super:bit expansion board.

Code

```
1 from microbit import *
2 import music
3
4 display.show(Image.MUSIC_QUAVER)
5 music.play(music.BIRTHDAY)
6
```

Assembly steps

Please refer to the **assembly steps** in the **Assembly instructions** folder for building blocks assembly steps.

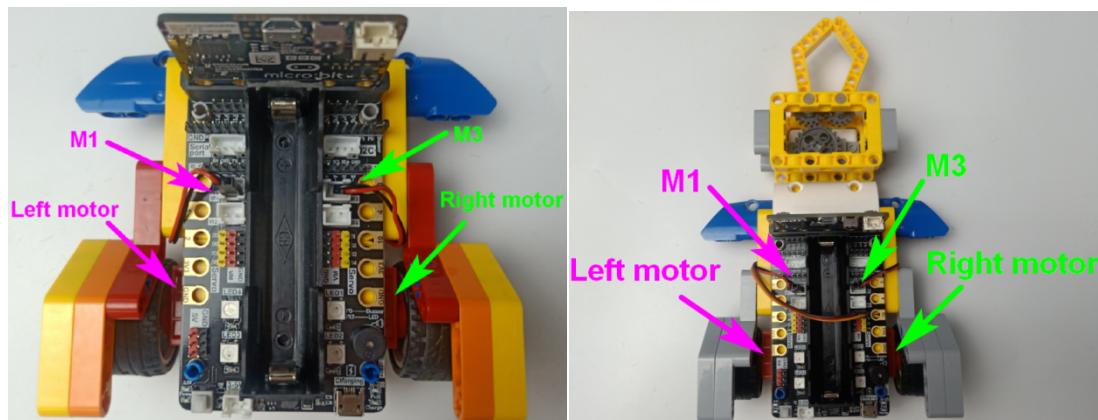
About wiring

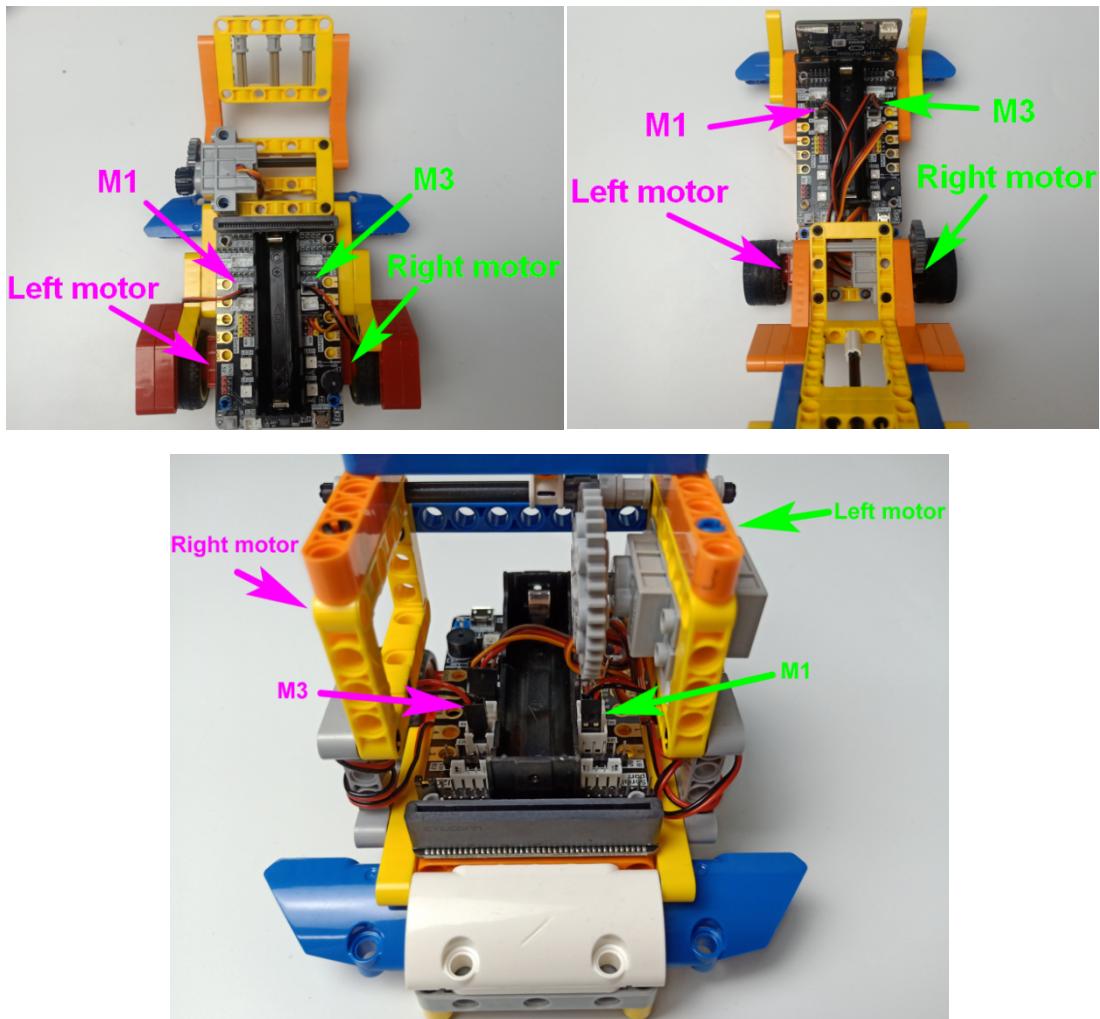
As shown below,

Left motor connect to M1 interface of super:bit.

Right motor connect to M3 interface of super:bit.

The black wiring of the motor is near the battery side.





Programming and downloading

1. You should open the Mu software, and enter the code in the edit window, , as shown below.

Note! All English and symbols should be entered in English, and the last line must be a space.

```

Mode | New | Load | Save | Flash | Files | REPL | Plotter | Zoom-in | Zoom-out | Theme | Check
Spider advance.py x
1 from microbit import *
2 import superbit
3
4 display.show(Image.HEART)
5
6 while True:
7     superbit.motor_control(superbit.M1, -255, 0)
8     superbit.motor_control(superbit.M3, -255, 0)
9
10
11

```

2. You can click the “Check” button to check if our code has an error. If a line appears with a cursor or an underscore, the program indicating this line is wrong.

Mu 1.0.3 - Spider advance.py

```

1 from microbit import *
2 import superbit
3
4 display.show(Image.HEART)
5
6
7 while True:
8     superbit.motor_control(superbit.M1, -255, 0)
9     superbit.motor_control(superbit.M3, -255, 0)
10
11

```

Well done! No problems here.

3. Click the 'REPL' button to check whether the super:bit library has been downloaded. If not, please refer to the [1.preparation before class] ---> [2.How to import Yahboom superbit library] import super:bit library tutorial.

Mu 1.0.3 - Spider advance.py

```

1 from microbit import *
2 import superbit
3
4 display.show(Image.HEART)
5
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7 while True:
8     superbit.motor_control(superbit.M1, -255, 0)
9     superbit.motor_control(superbit.M3, -255, 0)
10

```

BBC micro:bit REPL

MicroPython for Super:bit V1.1 modified by Yahboom Team
Type "help()" for more information.
>>>

4. After writing the code, please click the ‘Flash’ button to download the program to the micro:bit board.

The screenshot shows the Yahboom software interface. At the top, there is a toolbar with several icons: Mode, New, Load, Save, Flash (which is highlighted with a red box), Files, REPL, Plotter, Zoom-in, and Zoom-out. Below the toolbar, a file tab labeled "Spider advance.py" is open, showing the following Python code:

```
1 from microbit import *
2 import superbit
3
4 display.show(Image.HEART)
5
6
7 while True:
8     superbit.motor_control(superbit.M1, -255, 0)
9     superbit.motor_control(superbit.M3, -255, 0)
10
11
```

If the program is wrong or the experimental phenomenon is wrong after downloading, please confirm whether you have downloaded the superbit library hex file we provided to the micro: bit board.

For the specific method of adding library files, please refer to [【Preparation before class】](#) --- [【How to import Yahboom superbit library】](#)

Experimental phenomena

After the program is successfully downloaded, the micro:bit dot matrix will display the smile pattern. The buzzer will play music “happy birthday”.