



Omni:bit iOS APP control

In this lesson we will learn to use the Bluetooth APP to remotely control the Omni:bit.

1.Programming method:

Mode 1 online programming: First, we need to connect the micro:bit to the computer by USB cable. The computer will pop up a USB flash drive and click on the URL in the USB flash drive: <http://microbit.org/> to enter the programming interface. Add the Yahboom package <https://github.com/lzty634158/OmniBit> to program.

Mode 2 offline programming: We need to open the offline programming software. After the installation is complete, enter the programming interface, click 【New Project】 , add Yahboom package: <https://github.com/lzty634158/OmniBit>, you can program.

2.About code:

Please refer to the [microbit-Omnibit-APP-control.hex](#) file of this experiment.

3.Assembly steps

Please refer to the [1.Omnibit installation steps](#) in the [1.Assembly steps](#) folder for building blocks assembly steps.

4.About wiring

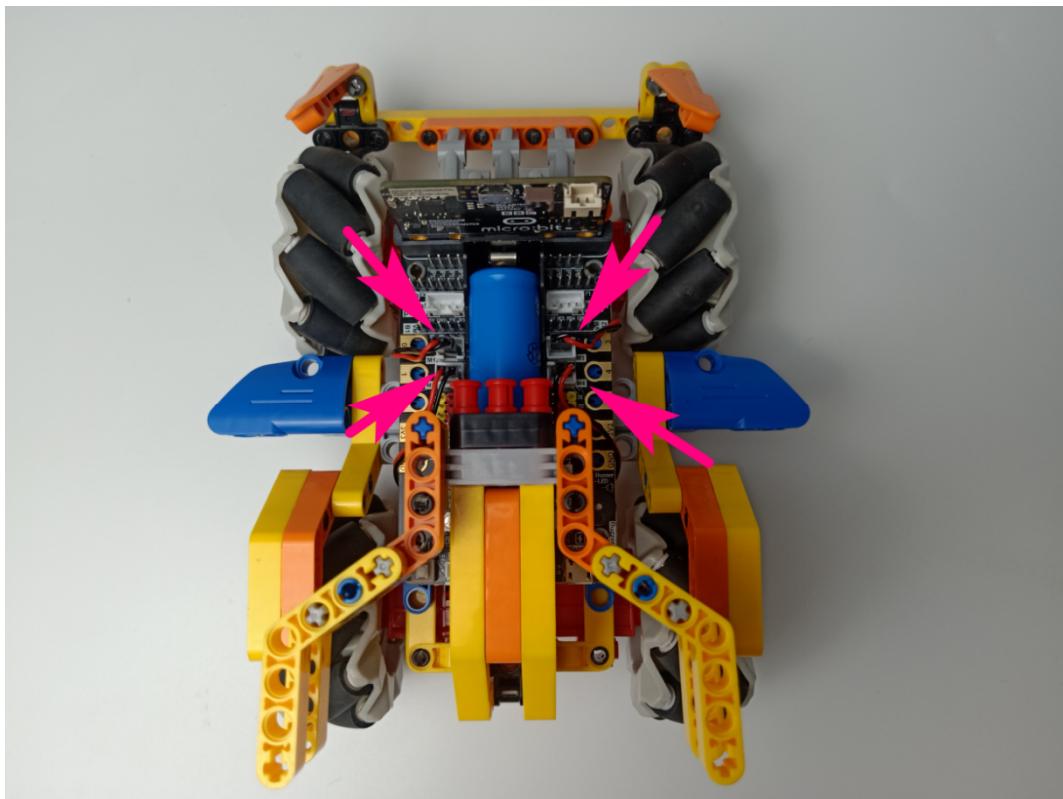
The left front motor is connected to the M1 interface of the Super:bit expansion board. The black line is on the battery side;

The left rear motor is connected to the M2 interface of the Super:bit expansion board, The black line is on the battery side;

The right front motor is connected to the M3 interface of the Super:bit expansion board, The black line is on the battery side;

The right rear motor is connected to the M4 interface of the Super:bit expansion board, The black line is on the battery side.

As shown below.



5. Download and install APP:

iOS users scan the following QR code by camera or search "Mbit" in App Store to download APP.



iOS



Android

After the download is complete, install it.

Note: If there are any prompts on the phone during installation, please select "Yes".

(for example, you need to obtain your mobile phone location permission.)

6. Steps:

6.1 First, we need to download the **microbit-Ominbit-APP-control.hex** to

micro:bit of the Spider, you can see that the micro:bit dot matrix shows an "S" as shown in Figure 1.1, which is the state that Bluetooth is not connected.

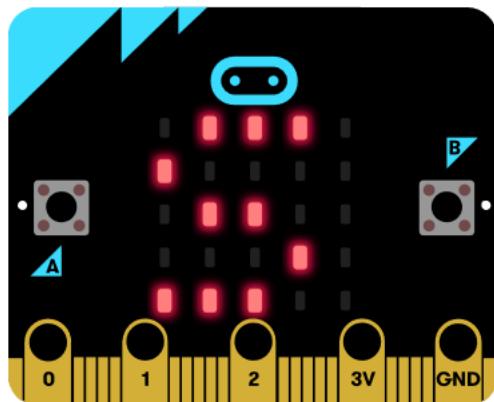
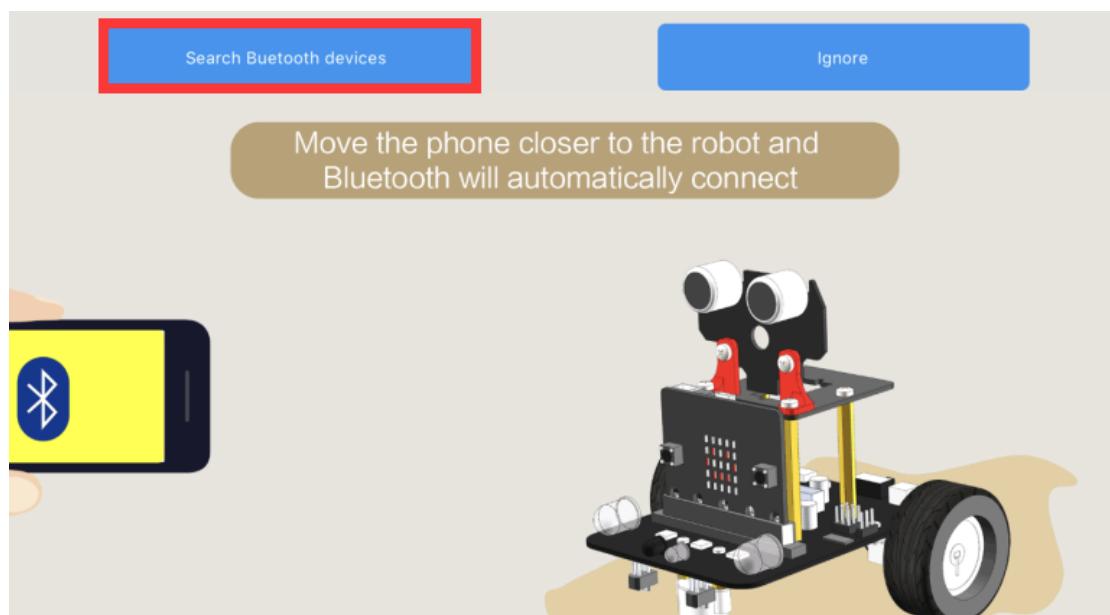


Figure 1.1

6.2 Open the Bluetooth of your mobile phone, and open the Bluetooth APP, Mobile phone close to robot Bluetooth automatic connection. If Bluetooth can't connect automatically, you need to click **【Search Bluetooth devices】** to connect the Bluetooth between the phone and the robot. As shown in Figure 1.2



6.3 When the APP interface is switched to the screen shown in Figure 1.3, and the robot's dot matrix is switched to the pattern shown in Figure 1.4, the connection is successful and the next operation can be performed.

If Bluetooth is disconnected, micro:bit will display the pattern of Figure 1.5.

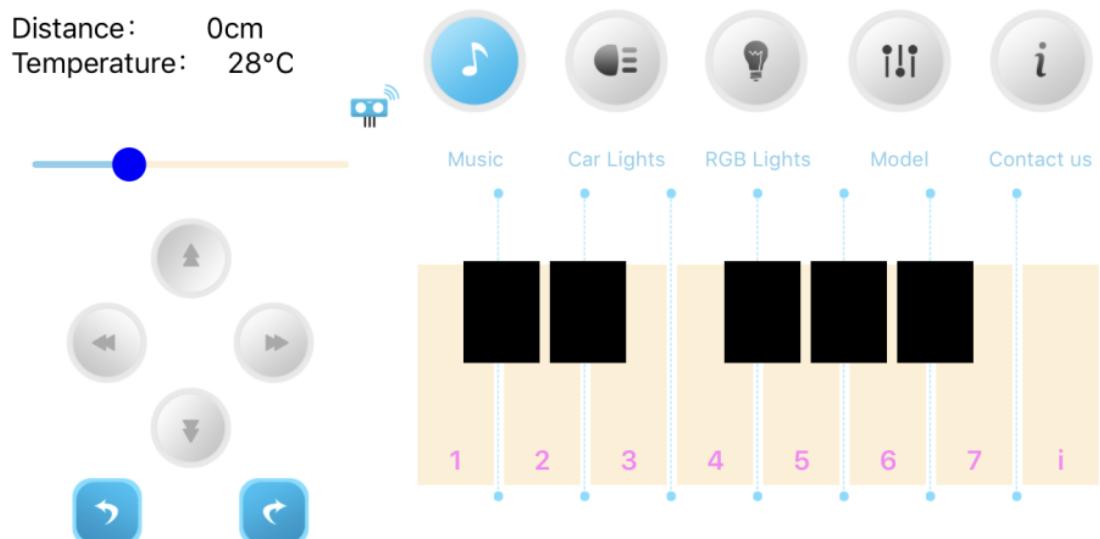


Figure 1.3

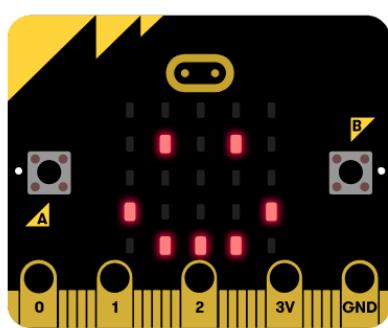


Figure 1.4

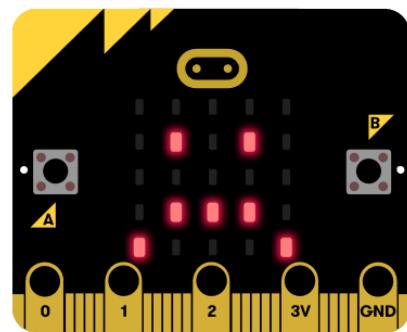


Figure 1.5

7. About APP interface:

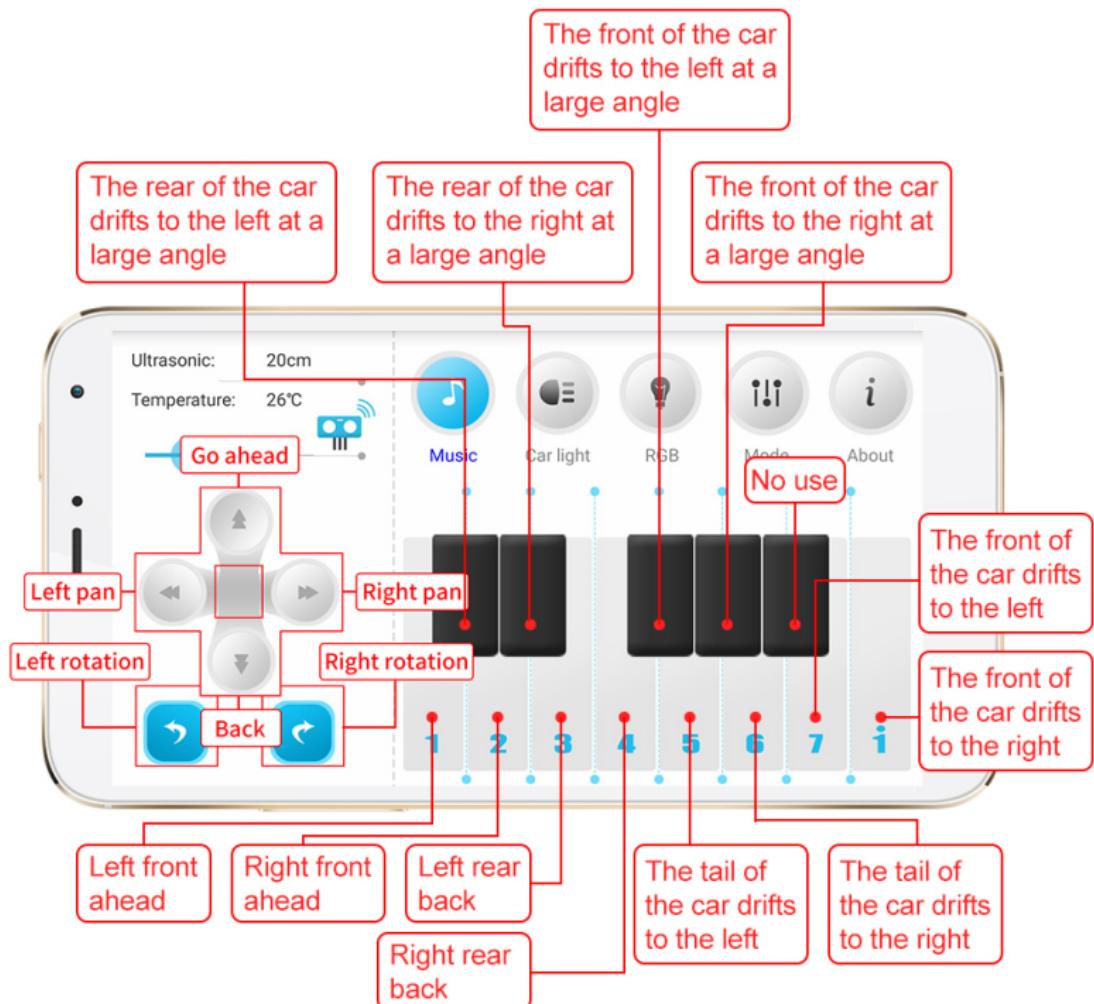
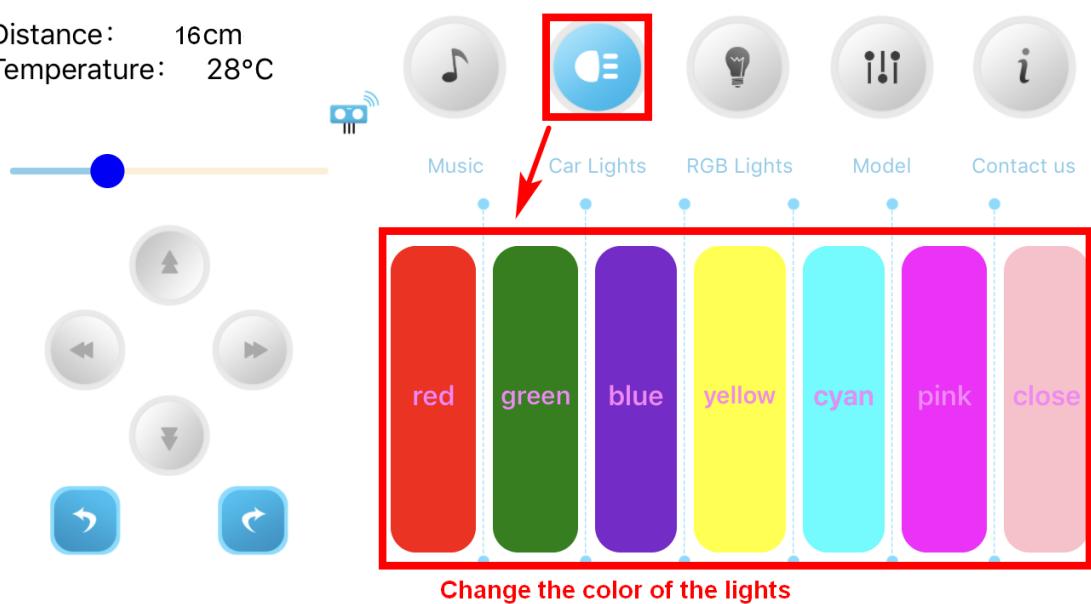


Figure 1.6

1. The forward button controls the car to advance;
2. The back button controls the car to retreat;
3. Press the left button to control the car left shift;
4. Press the right button to control the car right shift;
5. The left-hand button controls the car to rotate to the left;
6. The right-hand button controls the car to rotate to the right;
7. Piano button 1 controls the car to move forward in the left direction;
8. Piano key 2 controls the car to move forward in the right direction;
9. Piano button 3 controls the car to retreat to the left rear;
10. Piano button 4 controls the car to retreat to the right rear;
11. The piano key 5 controls the tail of the car to drift to the left;
12. Piano button 6 controls the tail of the car to drift to the right;
13. The piano key 7 controls the front of the car to drift to the left;
14. The piano key rises 1 to control the front of the car to drift to the right;
15. The piano key height C# controls the tail of the car to drift to the left at a large angle;
16. The piano key height D# controls the tail of the car to drift to the right angle;
17. The piano key height F# controls the car head to drift to the left at a large angle;
18. The piano key height G# controls the car head to drift to the right angle;
19. Piano key height A# does not control the movement of the car;
20. Piano button, press to hear the buzzer play different tones.

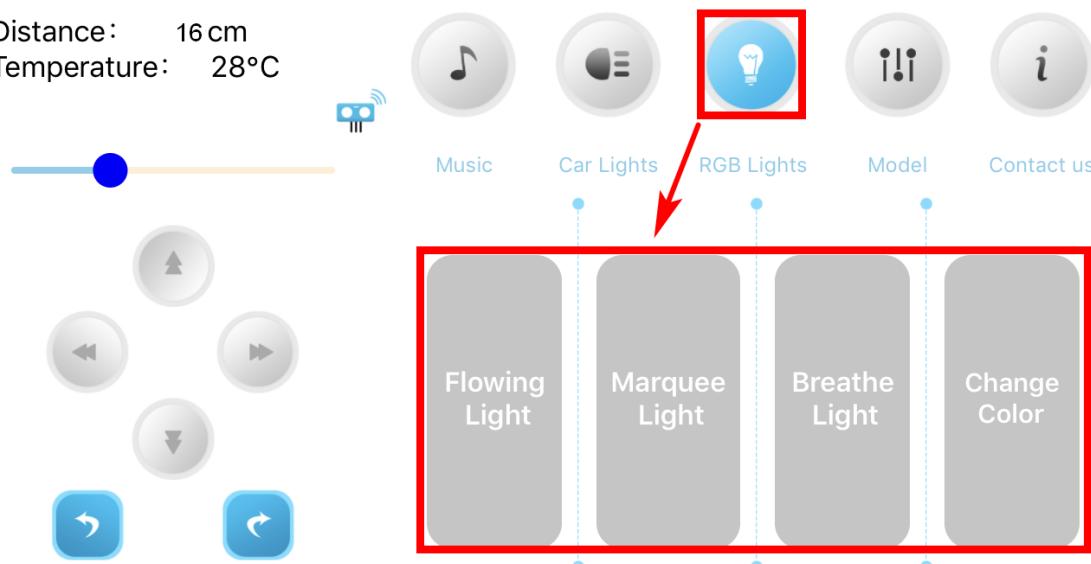
7.2 Car light

Distance: 16cm
Temperature: 28°C



7.3 RGB

Distance: 16 cm
Temperature: 28°C



!!!Note: Mode option is unavailable.