Oscillating fan APP control

1.Learning goals

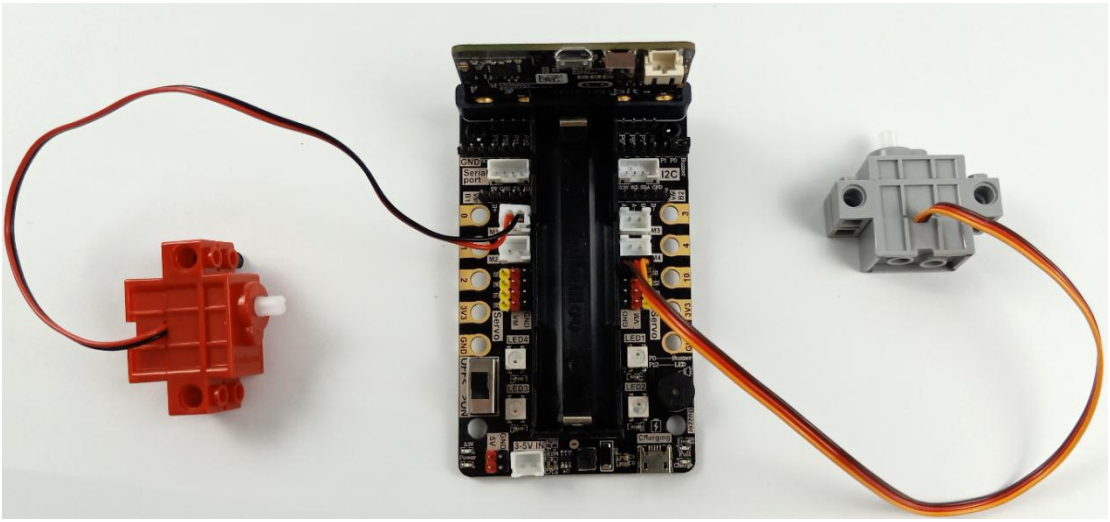
In this course, we mainly learn how to use APP control Oscillating fan.

2.Building block assembly steps

For the building block construction steps, please refer to the installation manual or building block installation picture of [Assembly course]-[Oscillating fan].

3.Wiring of motor and servo

The motor wiring is inserted into the M1 interface of the Super:bit expansion board, and the black wire is close to the battery side;
Building block servo insert into the Super:bit expansion board S1 interface, and the orange wiring connect the yellow pin of S1.
As shown below.



4.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/SuperBit** 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/SuperBit**, you can program.

5.About code

The summary program of this course can be viewed by opening the hex we provided on the MakeCode programming interface.

6.Download APP

Android users scan the following QR code by browser or search "Mbit" in Play Store t

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

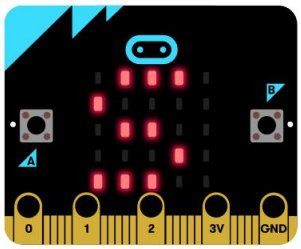
IOS

Android

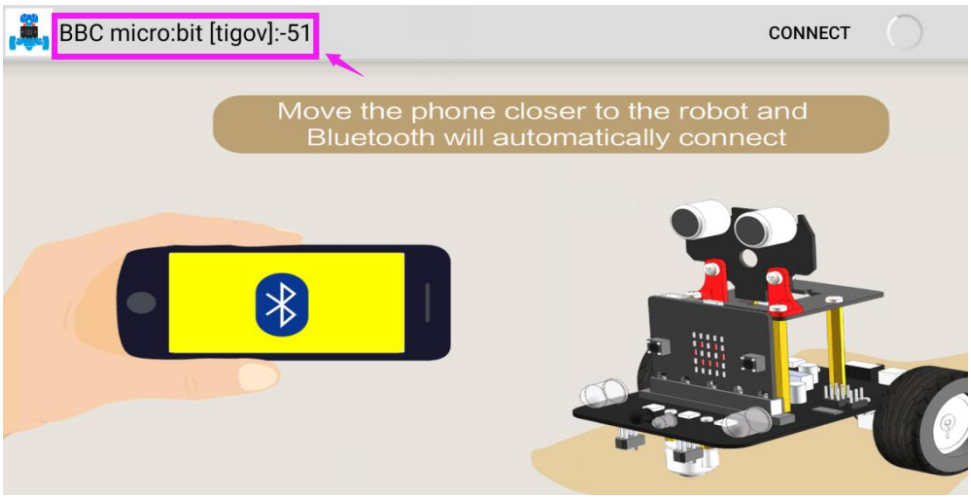
Note: If there are any prompts on the phone during installation, please select "Allow".

7. APP remote control

1) After the program is downloaded successfully, turn on the power switch of the car, the micro: bit dot matrix will display the "S" pattern, as shown below, this is the state of Bluetooth not connected.



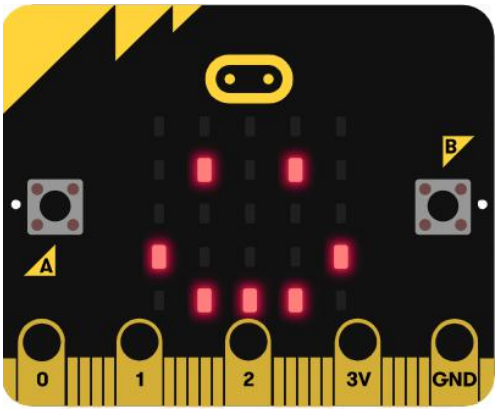
2)Open the Bluetooth of your mobile phone, and open the Bluetooth APP. You can see the interface as shown below. At the same time, you can see the Bluetooth signal in the upper left corner.



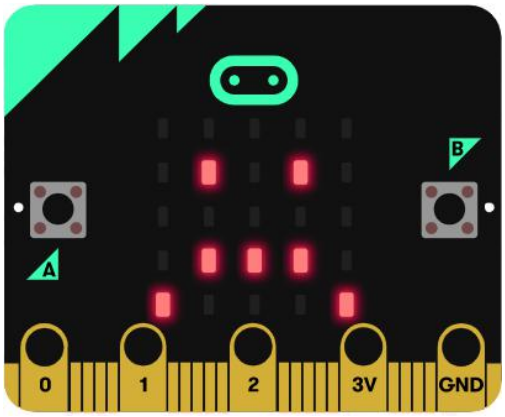
3)Mobile phone close to robot Bluetooth automatic connection. If Bluetooth can't connect automatically, you need to click 【CONNECT】 to connect the Bluetooth

between the phone and the robot.

After Bluetooth connection successfully, micro:bit dot matrix will display a smile pattern. If Bluetooth disconnect, it will display a cry pattern.



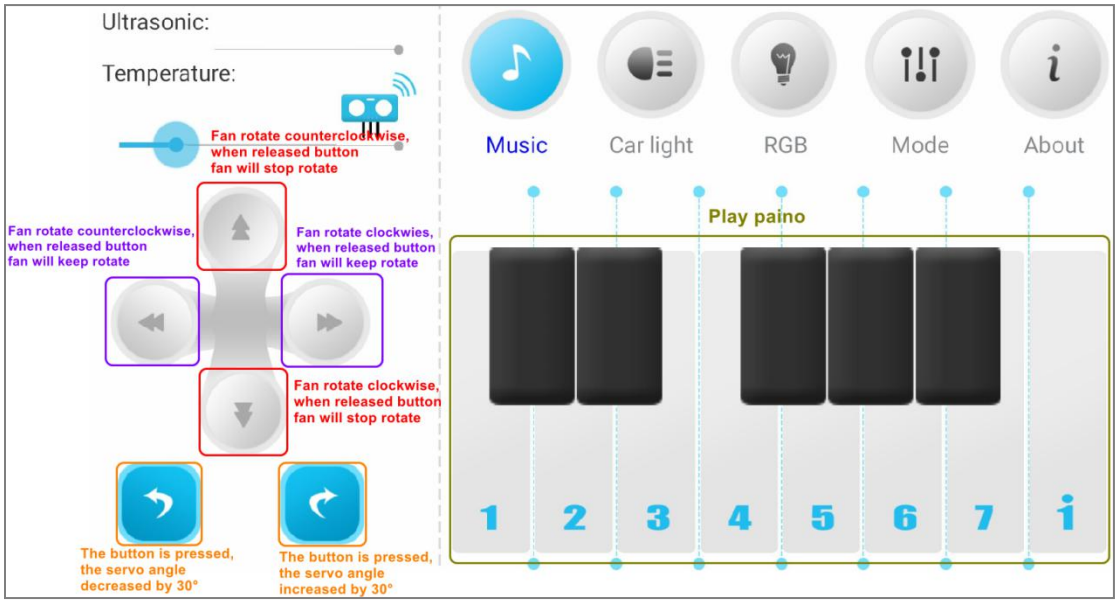
【Bluetooth be connected】



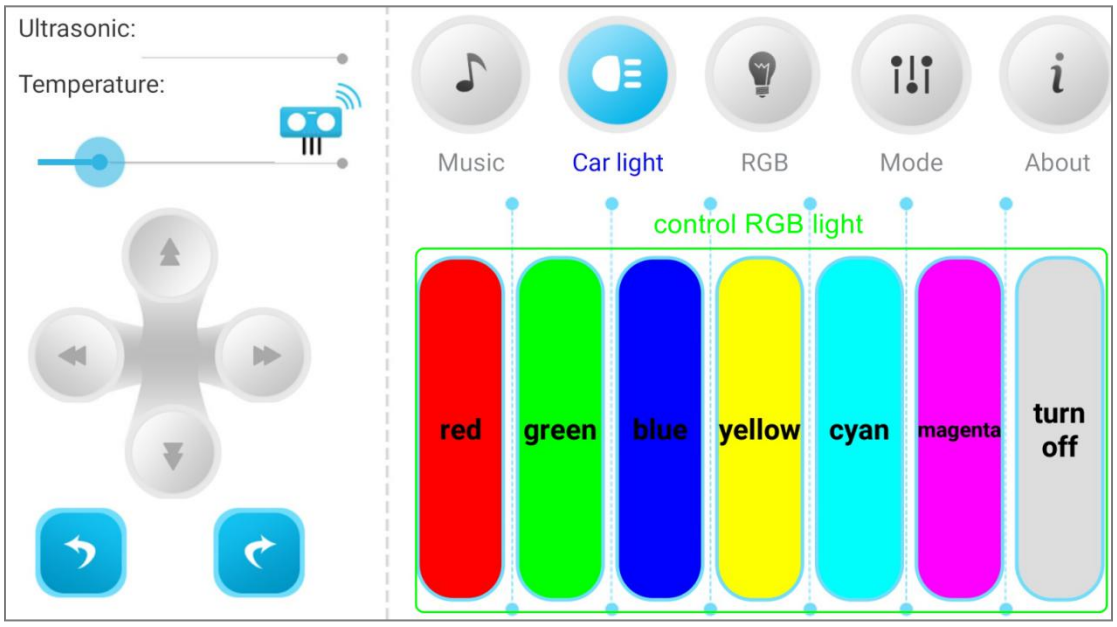
【Bluetooth disconnect】

Main control interface:

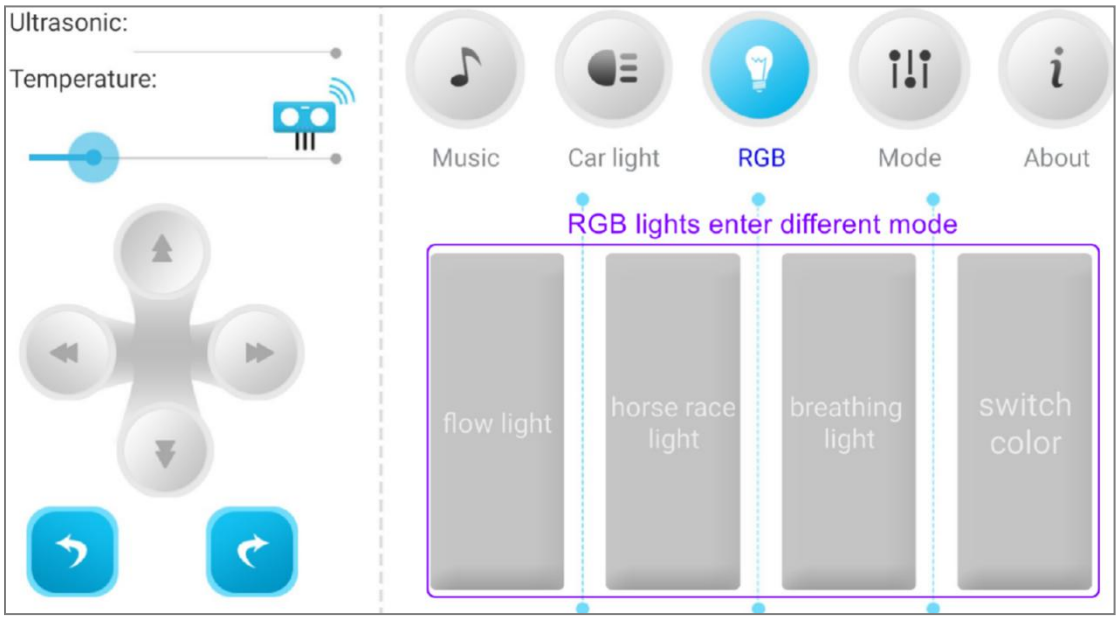
- Forward button controls the fan to rotate counterclockwise, and it will stops when button is released;
- Back button controls the fan to rotate clockwise, and it will stops when button is released;
- Left button to controls the fan to rotate counterclockwise, and it will keep rotate when button is released;
- Right button controls the fan to rotate clockwise, and it will keep rotate when button is released;
- Piano key 1 controls the fan to stop rotating;
- Spin left button controls the fan to shake head to the left(servo angle decreases by 30°)
- Spin right button controls the fan to shake head to the right(servo angle increases by 30°)
- Press the piano 1 keys to stop fan.
- Press the piano keys to make buzzer play different tones.



Car light interface



RGB interface



!Note: Mode option is unavailable.