3.7 micro:bit handle control

1. Learning goals

In this lesson, we will learn to use the APP control the building blocks balance car.

2.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 and https://github.com/lzty634158/GHBit to program.

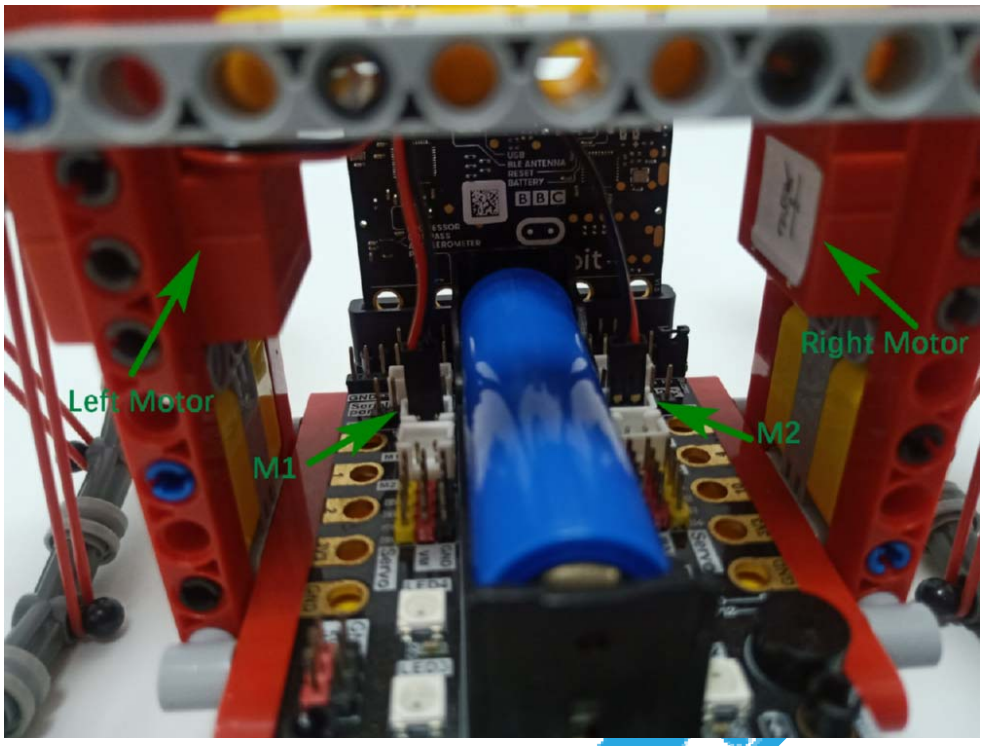
Mode 2 offline programming: We need to open the offline programming software. After the installation is complete, enter the programming interface, click【New Project】, add Yahboom package: https://github.com/lzty634158/SuperBit and https://github.com/lzty634158/GHBit, you can program.

3.Assembly steps

Please refer to the **[Tumblebit Assembly Steps]**

4.About wiring

The motor wiring on the left side of the building block balance car is connected to the Super:bit M1 interface, and the black wire is on the battery side.
The motor wiring on the right side of the building block balance car is connected to the Super:bit M3 interface, and the black wire is on the battery side.
As shown below:



5.About code

Please refer to the **microbit handle code** file and **Tumblebit car** code of this experiment.

6.Steps

6.1 Handle rocker control

First, we need to download the **microbit-handle-control-Tumblebit-car-code.hex** to micro:bit car, you can see that the micro:bit dot matrix shows an "smile"pattern as shown in Figure 1.1.

we need to download the **microbit-Handle-rocker-control.hex** to micro:bit of Handle, you can see that the micro:bit dot matrix shows an "heart" as shown in Figure 1.2.

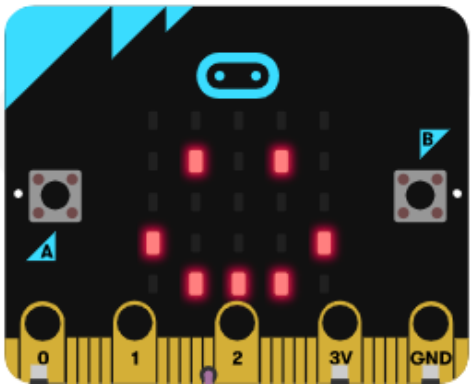


Figure 1.1

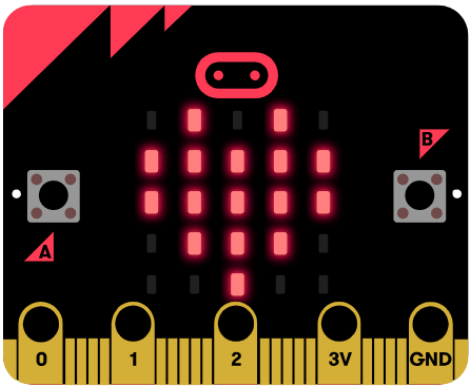
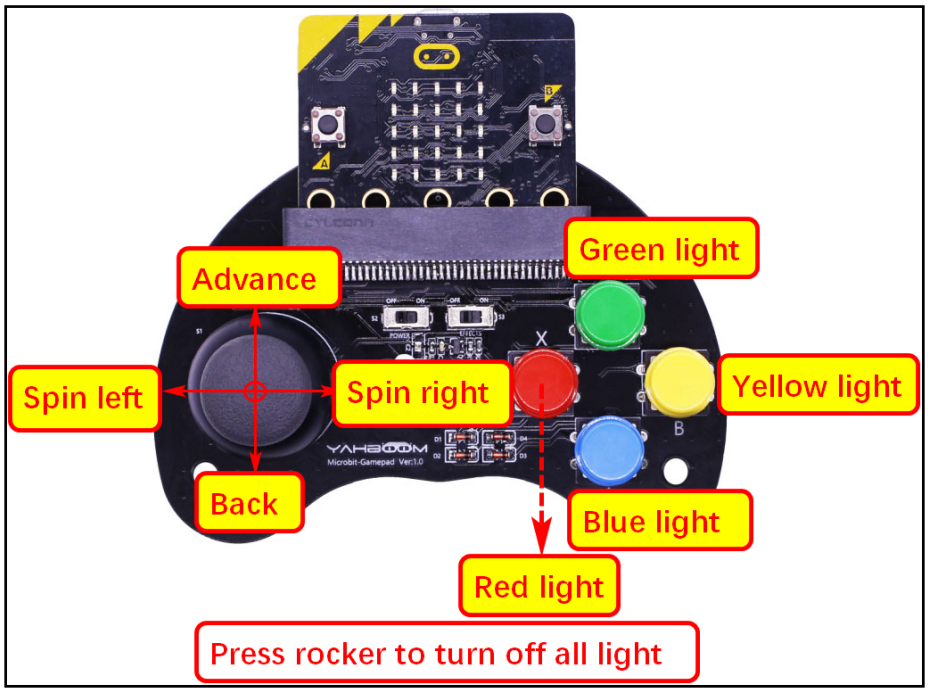


Figure 1.2

Then, open the micro:bit handle. After the handle is connected with the micro:bit of car, you can use the rocker to control the forward, backward, turn

left, and turn right .
And use the handle button to switch the Color of RGB light. Press the rocker to turn off the RGB light and buzzer sound.



6.2 Handle gravity control

First, we need to download the **microbit-handle-control-Tumblebit-car-code.hex** to micro:bit of Pretty car, you can see that the micro:bit dot matrix shows an pattern as shown in Figure 1.3.

we need to download the **microbit-Handle-gravity-control.hex** to micro:bit of Handle, you can see that the micro:bit dot matrix shows an “heart” as shown in Figure 1.4.

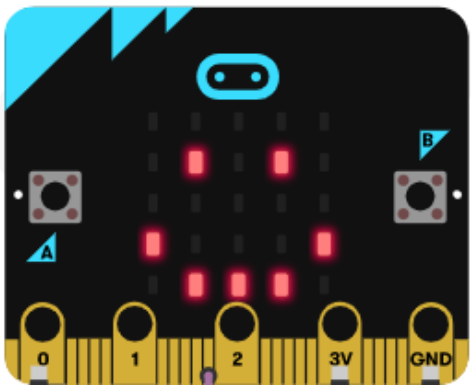


Figure 1.3

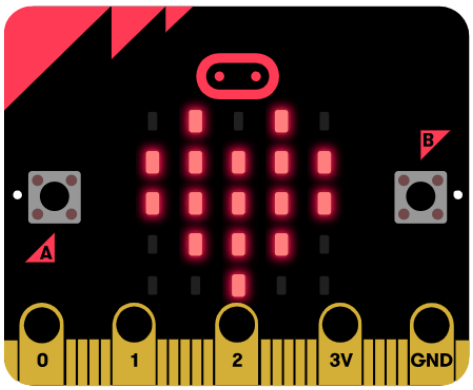
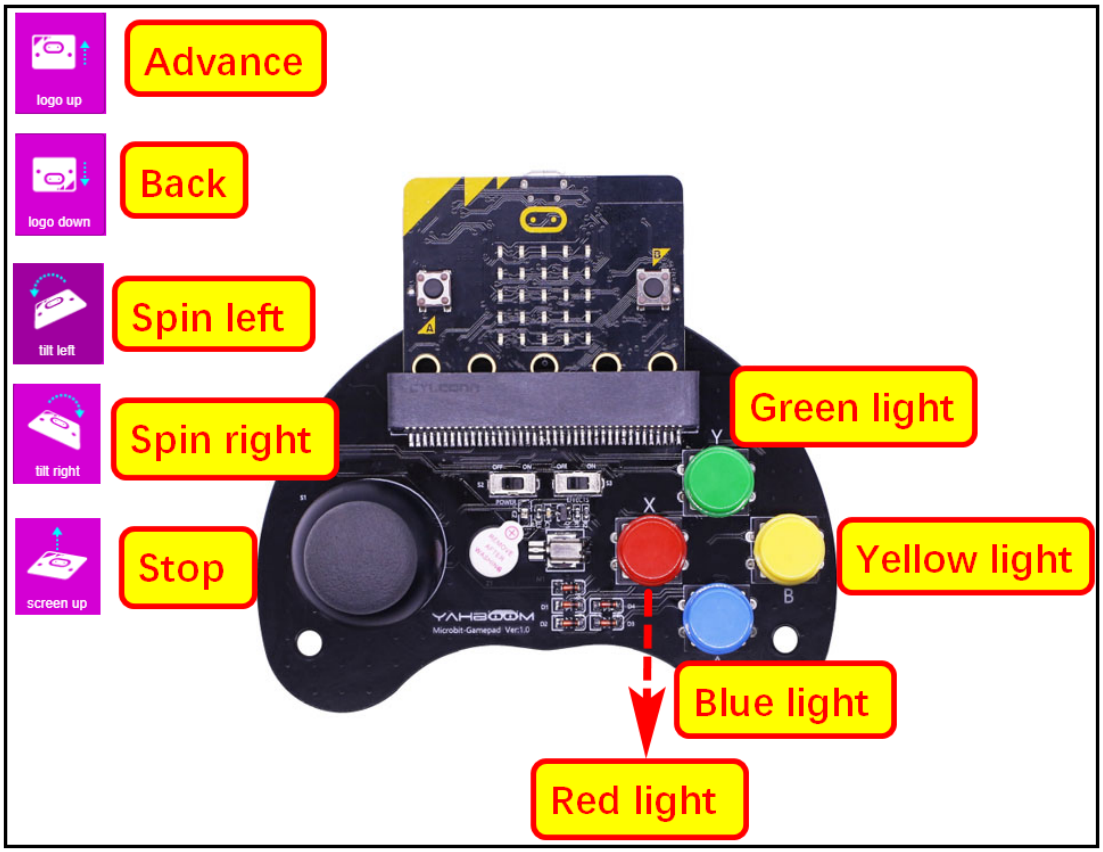


Figure 1.4

Then, open the micro:bit handle. After the handle is connected with the micro:bit of car, you can shake handle to control the forward, backward, turn left, and turn right .

And use the handle button to switch the Color of RGB light.


logo up
Advance
logo down
Back
tilt left
Spin left
tilt right
Spin right
screen up
Stop
Green light
Yellow light
Blue light
Red light