

## Music carousel

**! Note: Due to the building block structure, the carousel only supports clockwise rotation. That is, the speed needs to be set to -255 during programming, and cannot be set to a positive number.**

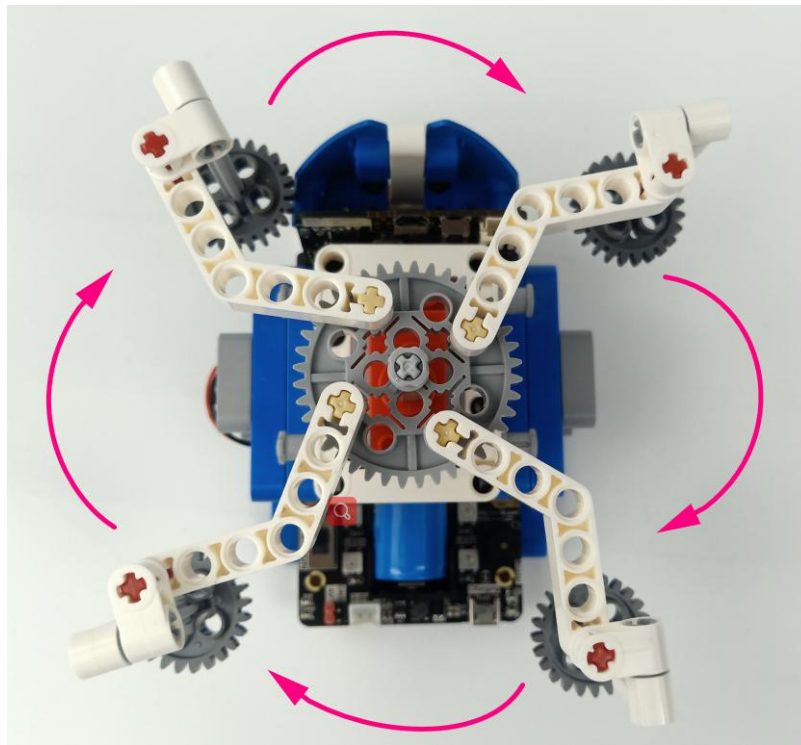
### 1.Learning goals

In this course, we mainly learn how to use the MakeCode graphical programming to realize the carousel rotation and “singing”, that is, the motor and buzzer work simultaneously.

### 2.Building block assembly steps

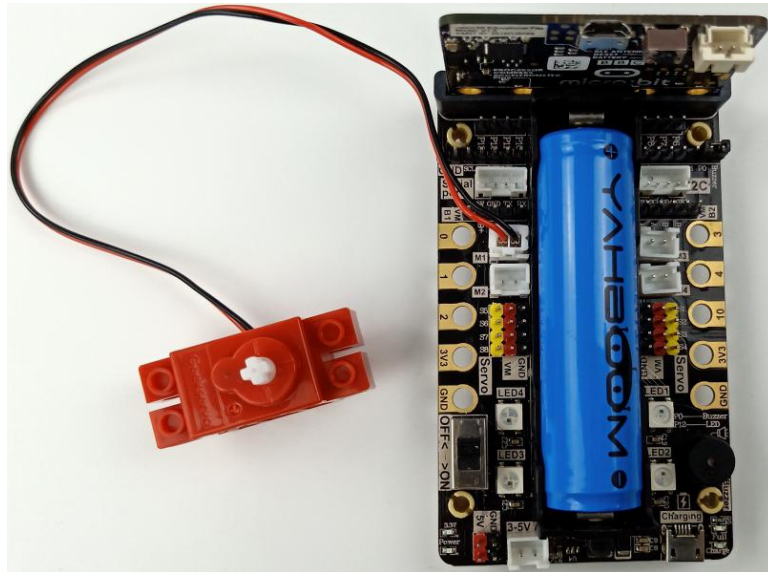
For the building block construction steps, please refer to the installation manual or building block installation picture of [Assembly course]-[Carousel].

**Please make sure that the direction of the L-shaped hole, as shown below.**



### 3.Wiring of motor

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; As shown below.



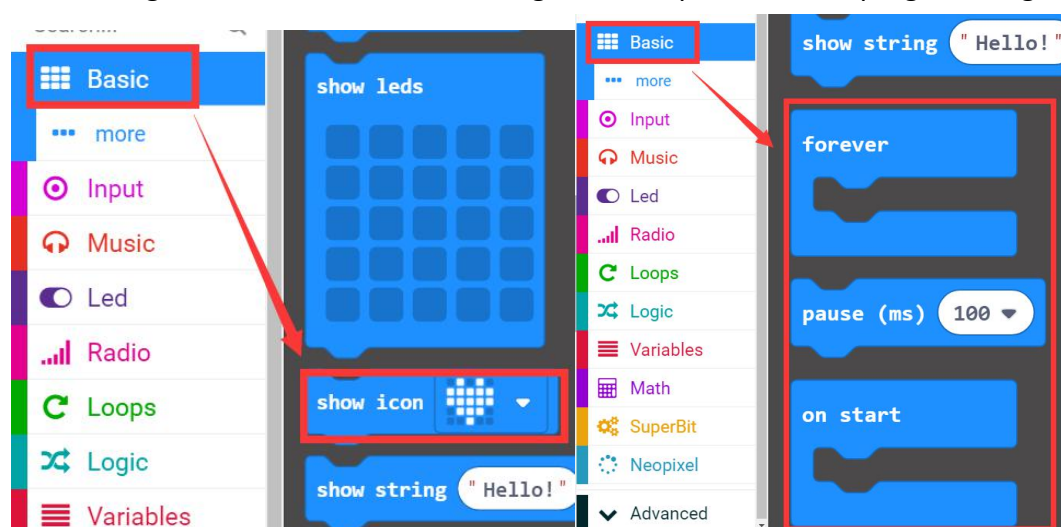
#### 4. Programming method

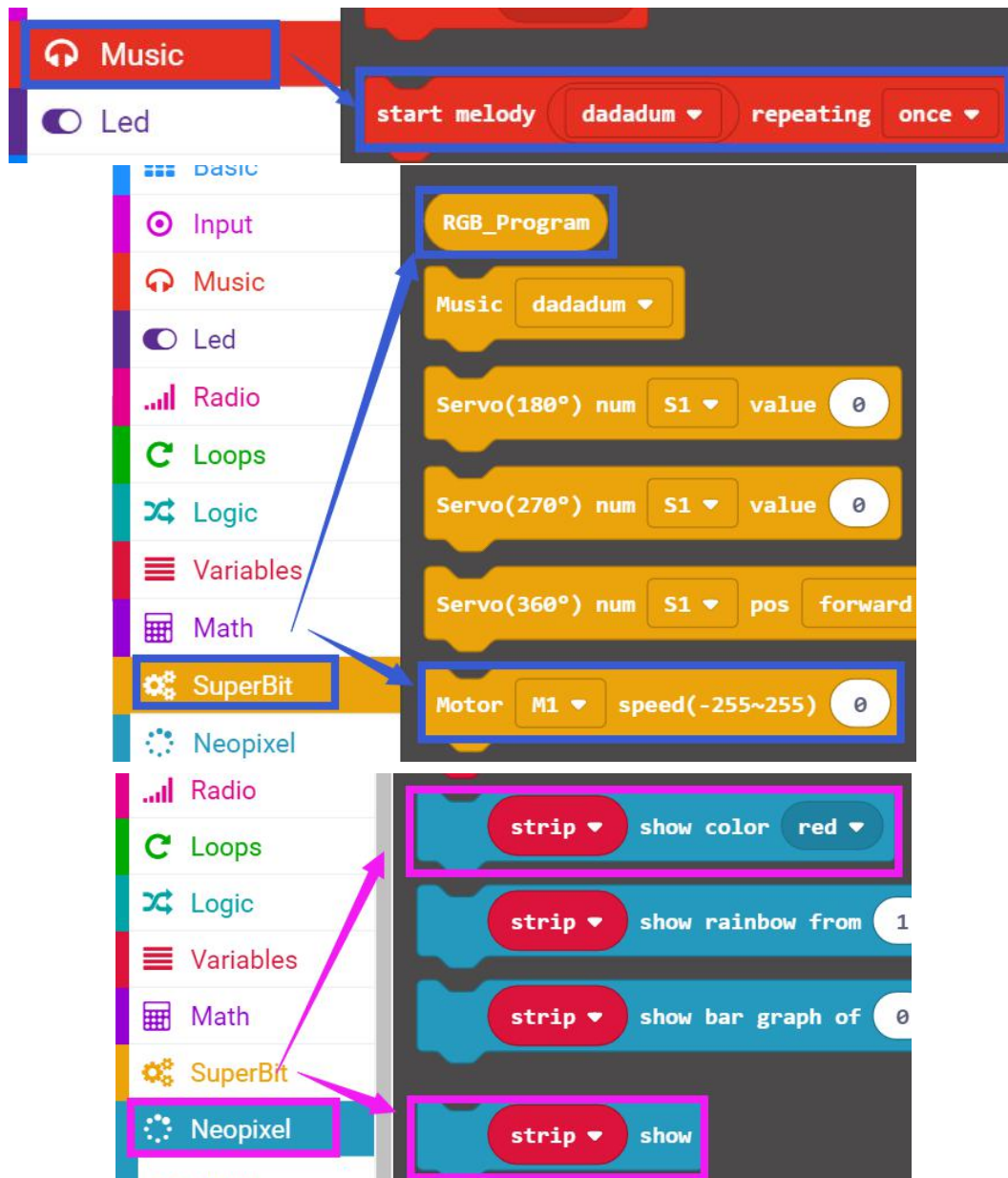
**Mode 1 online programming:** First, we need to connect the micro:bit to the computer by USB cable. The computer will pop up a USB flash drive and click on the URL in the USB flash drive: <http://microbit.org/> to enter the programming interface. Add the Yahboom package <https://github.com/lzty634158/SuperBit>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

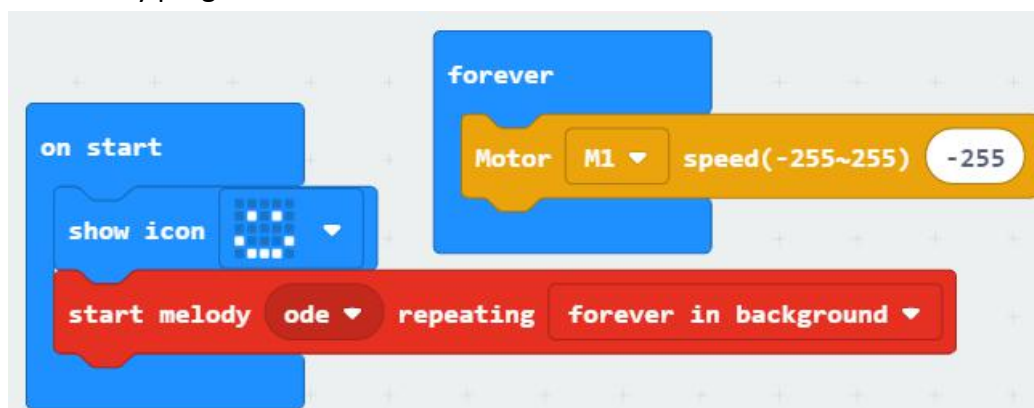
The following is the location of the building blocks required for this programming.





## 6.Combine block

The summary program is shown below.

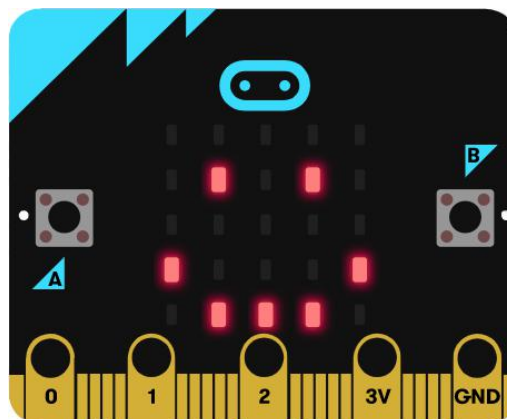




## 7.Experimental phenomena

After the program is successfully downloaded, the micro:bit dot matrix will display the smile pattern, as shown below.

Then, the carousel rotates clockwise, the buzzer starts to play the music "Ode, RGB will also switch different colors.



If you need to restart, press the reset button on the back of the micro:bit board.