

6.11 Listener

Listener.hex

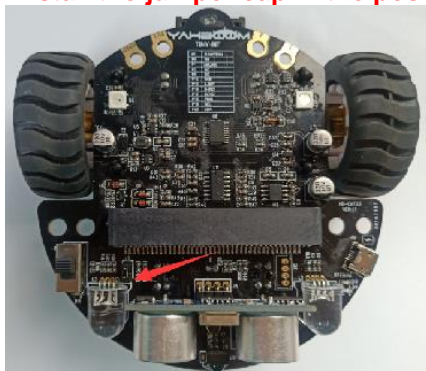
http://www.yahboom.net/xiazai/Tiny_bit/6.Playing%20with%20Tiny%20bit/Listener.hex

!Note: In order to reduce the interference of other sounds on the voice sensor, we need to carry out this experiment in a relatively quiet environment.

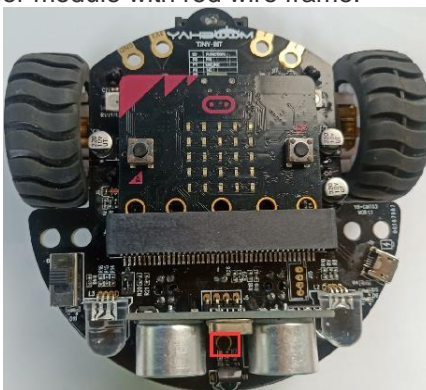
1.Preparation

1-1.The position of the Voice sensor module in the robot

!!! Note: In this experiment, we need to install the jumper cap in the position shown below.



In the picture shown below, the voice sensor module with red wire frame.



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/Tiny-bit> 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/Tiny-bit>, you can program.

In the picture shown below, the ultrasonic module with red wire frame.

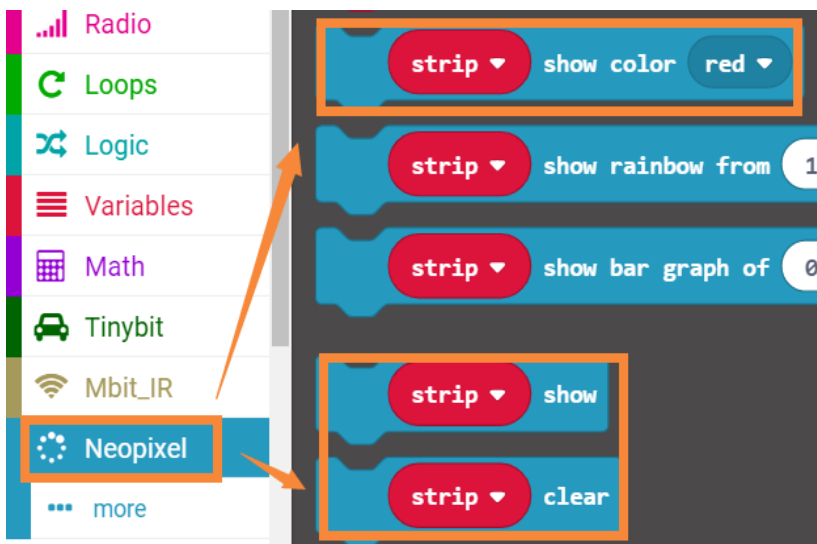
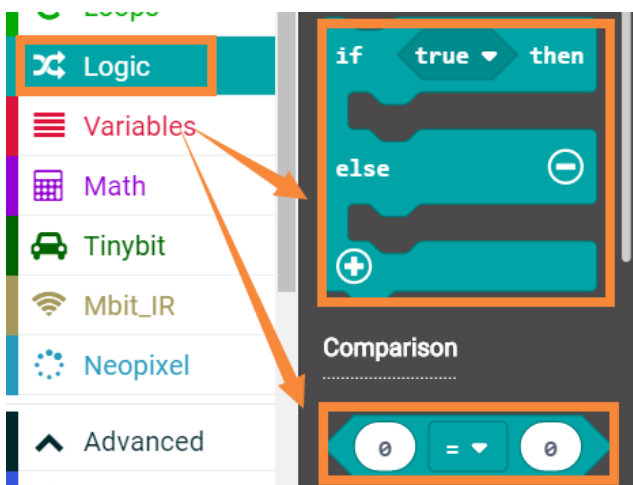
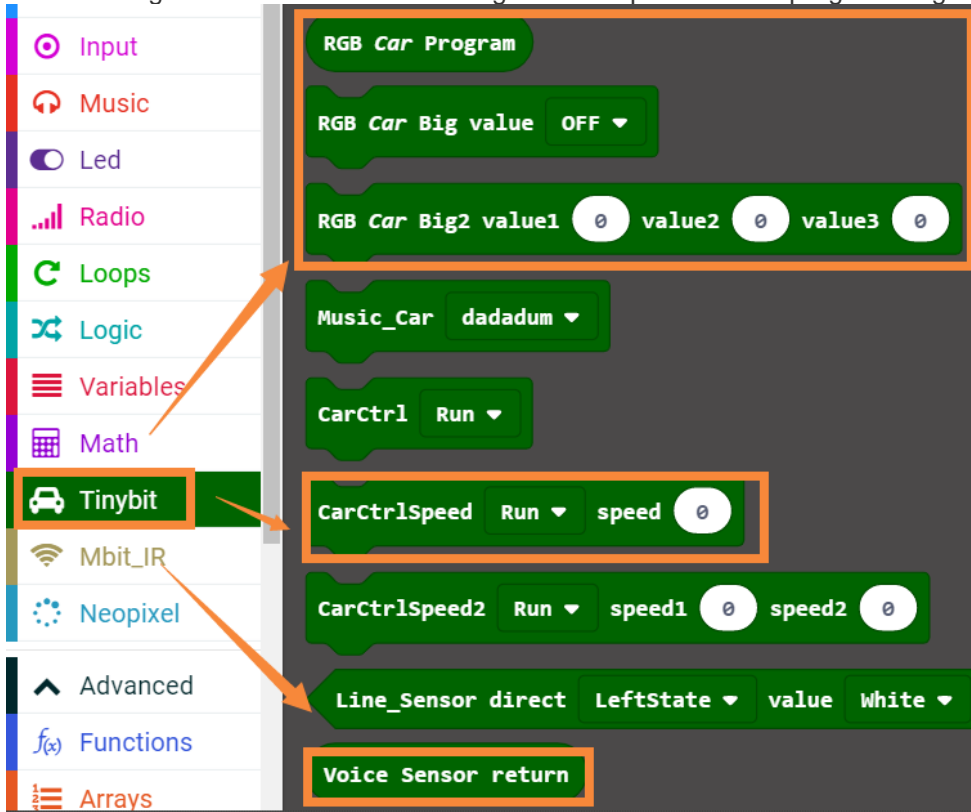
2.Learning goal

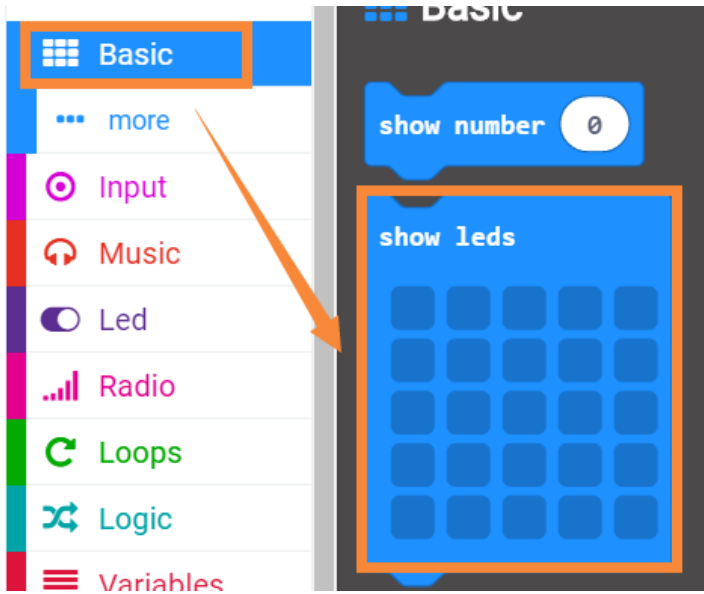
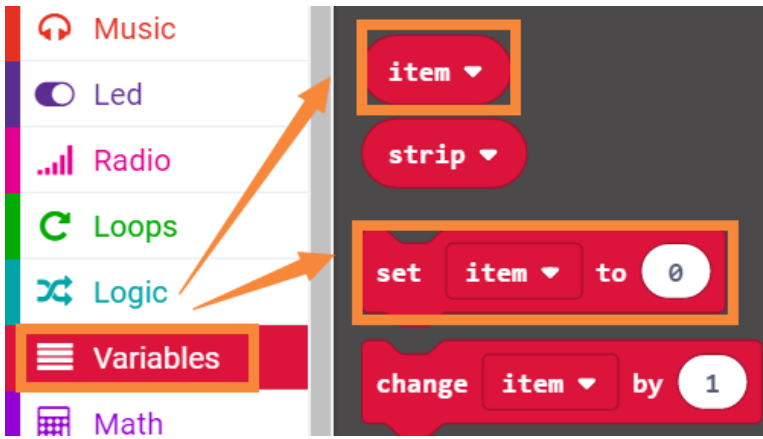
2-1. Learn how to use voice sensor return graphically program building blocks and RGB searching lights graphically program building blocks

2-2. The function is realized by programming: When the sound sensor detects sounds of different intensities, the lights of robot car will switch color and brightness, the micro:bit dot matrix displays different patterns. And Tiny-bit will wobble with different amplitudes according to the intensity of the sound.

3.Search for block

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





4. Combine block

Please see [microbit-Listener.hex](#) for the program

5. Experimental phenomena

After the program is downloaded, we need to put robot car on the desk. Open the power of the robot car, when the sound sensor detects sounds of different intensities, the lights of robot car will switch color and brightness, the micro:bit dot matrix displays different patterns. And Tiny-bit will wobble with different amplitudes according to the intensity of the sound.

