

Infrared detection broadcast

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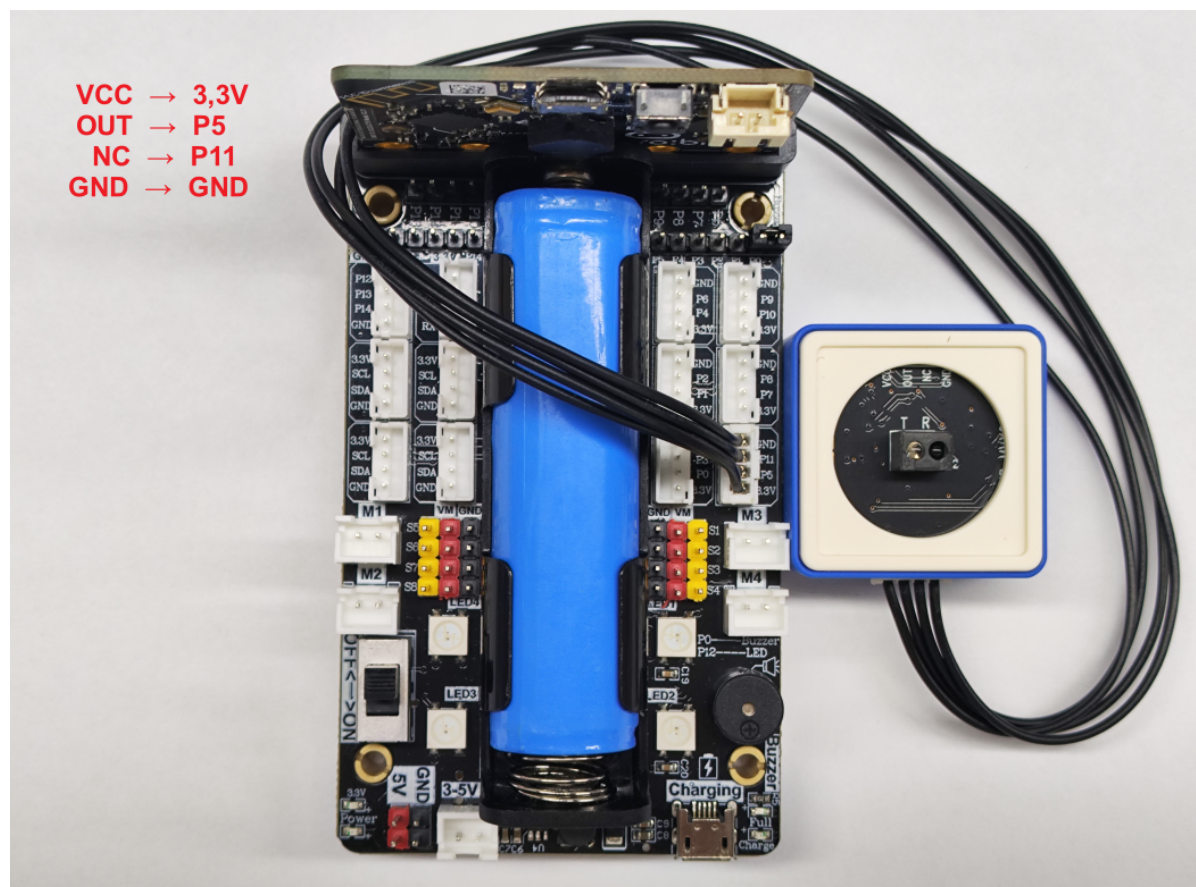
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1. Learning objectives

In this course, we mainly learn how to display infrared detection broadcasts through MakeCode graphical programming.

2. Sensor wiring

The infrared module is connected to the P5P11 interface.



3. Programming

Method 1 Online programming:

First, connect micro:bit to the computer via a USB data cable. The computer will pop up a U disk. Click the URL in the U disk: <https://makecode.microbit.org/> to enter the programming interface. Then, add the Yahboom software package <https://github.com/YahboomTechnology/SuperBitLibV2> to start programming.

Method 2 Offline programming:

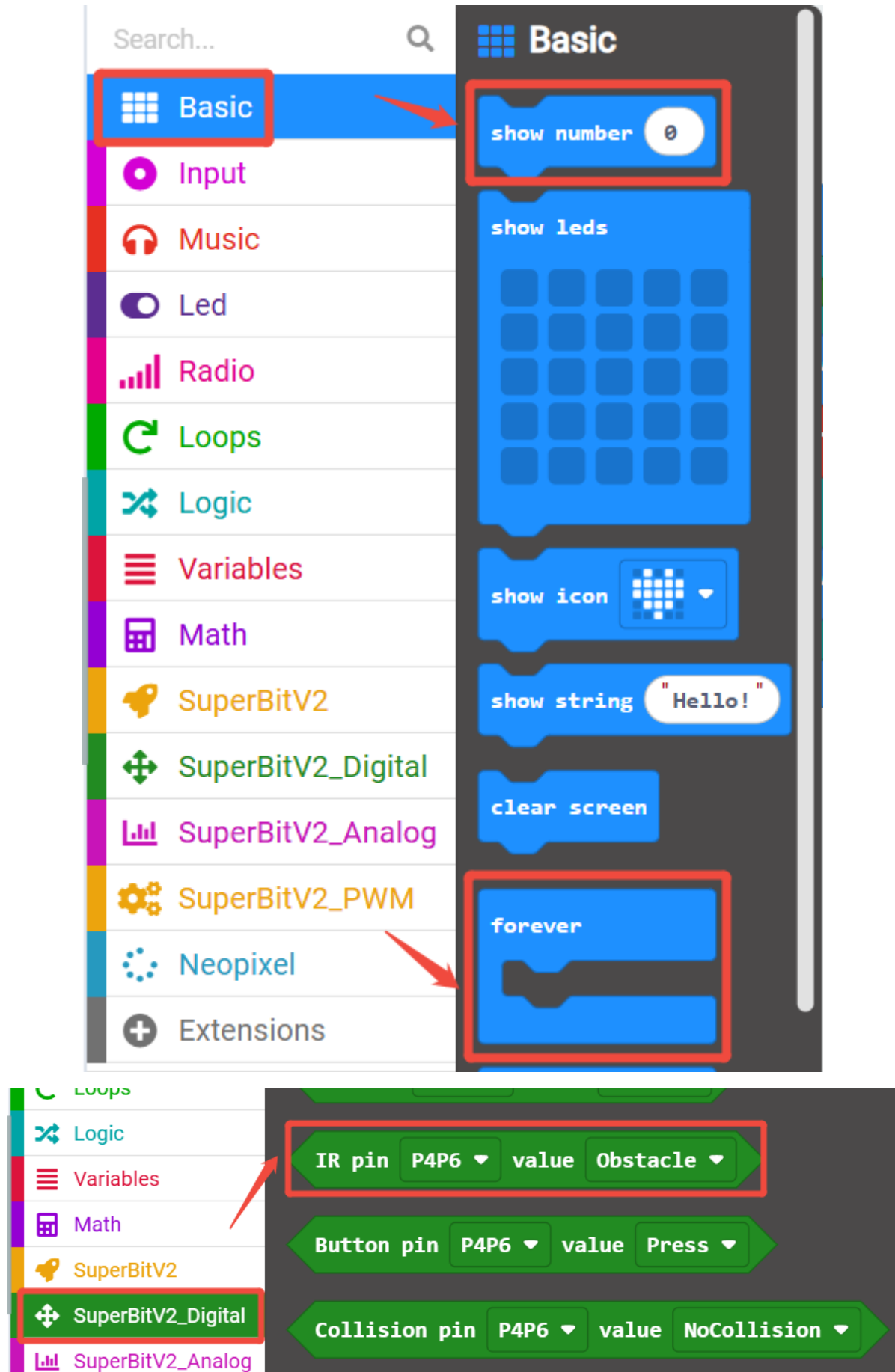
Open the offline programming software MakeCode and enter the programming interface. Click [New] and add the Yahboom software package <https://github.com/YahboomTechnology/SuperBitLibV2> to start programming.

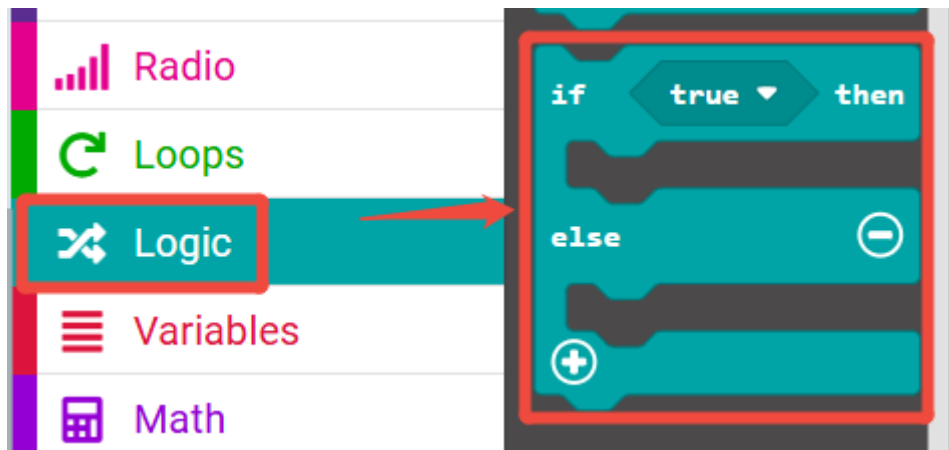
3.1 Add expansion package

The image shows the MakeCode Micro:bit IDE interface. On the left is a visual representation of a micro:bit board with various components like a screen, buttons, and pins labeled 0, 1, 2, 3V, and GND. On the right is a sidebar with a search bar and a list of extension categories: Basic, Input, Music, Led, Radio, Loops, Logic, Variables, Math, Extensions (highlighted with a red box), and Advanced. Below this, the 'Extensions' panel is open, showing a search bar with the URL <https://github.com/YahboomTechnology/SuperBitLibV2> (labeled 1) and a search icon (labeled 2). Below the search bar are category filters: Lights and Display, Software, Science, Robotics, Gaming, and Networking. The search results show a card for 'SuperBitV2' (labeled 3), described as 'Extension for YahBoom SuperBitV2'. At the bottom of the card, it states 'User-provided extension, not endorsed by Microsoft. Learn More'.

3.2 Building blocks used

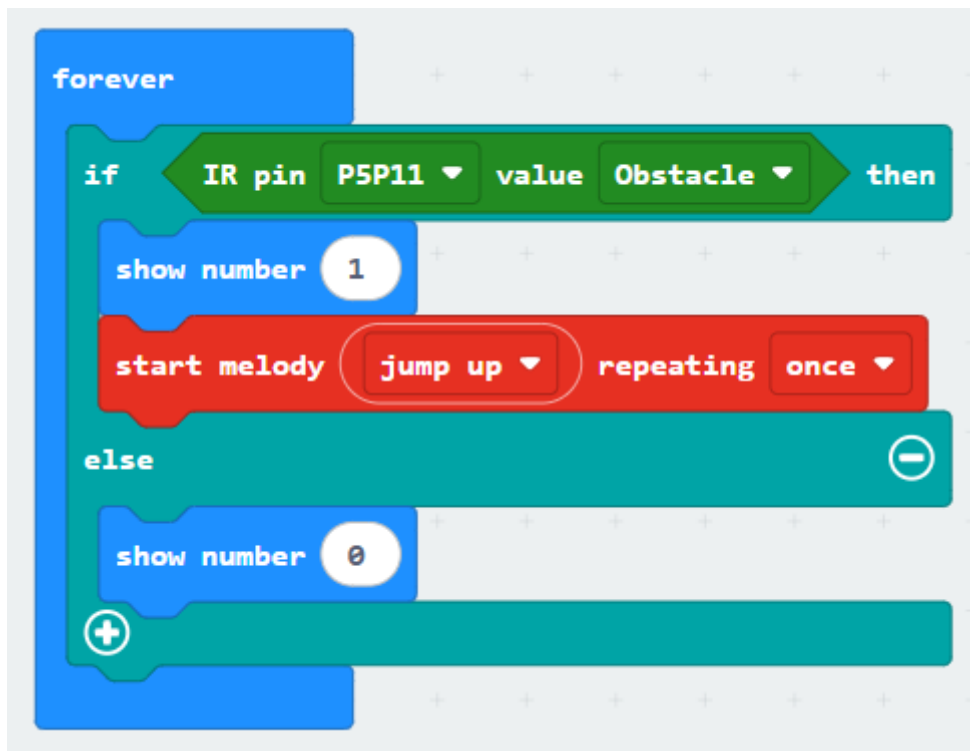
The location of the building blocks required for this programming is shown in the figure below.





3.3 Combining blocks

The summary program is shown in the figure below.



You can also directly open the **Infrared-detection-broadcast.hex** file provided in this experiment and drag it into the browser that opens the URL, and the program diagram of this project source code will be automatically opened

4. Experimental phenomenon

After the program runs successfully, when an obstacle is detected, the microbit dot matrix displays 1 and plays jump up music, otherwise it displays 0.