Rocker carrier

1. Learning objectives

In this course, we mainly learn how to realize joystick remote control transporter through MakeCode graphical programming.

2. Building blocks

For the building blocks steps, please refer to the installation drawings of [Assembly Course]--[Joystick transporter] in the materials or the building blocks installation album.

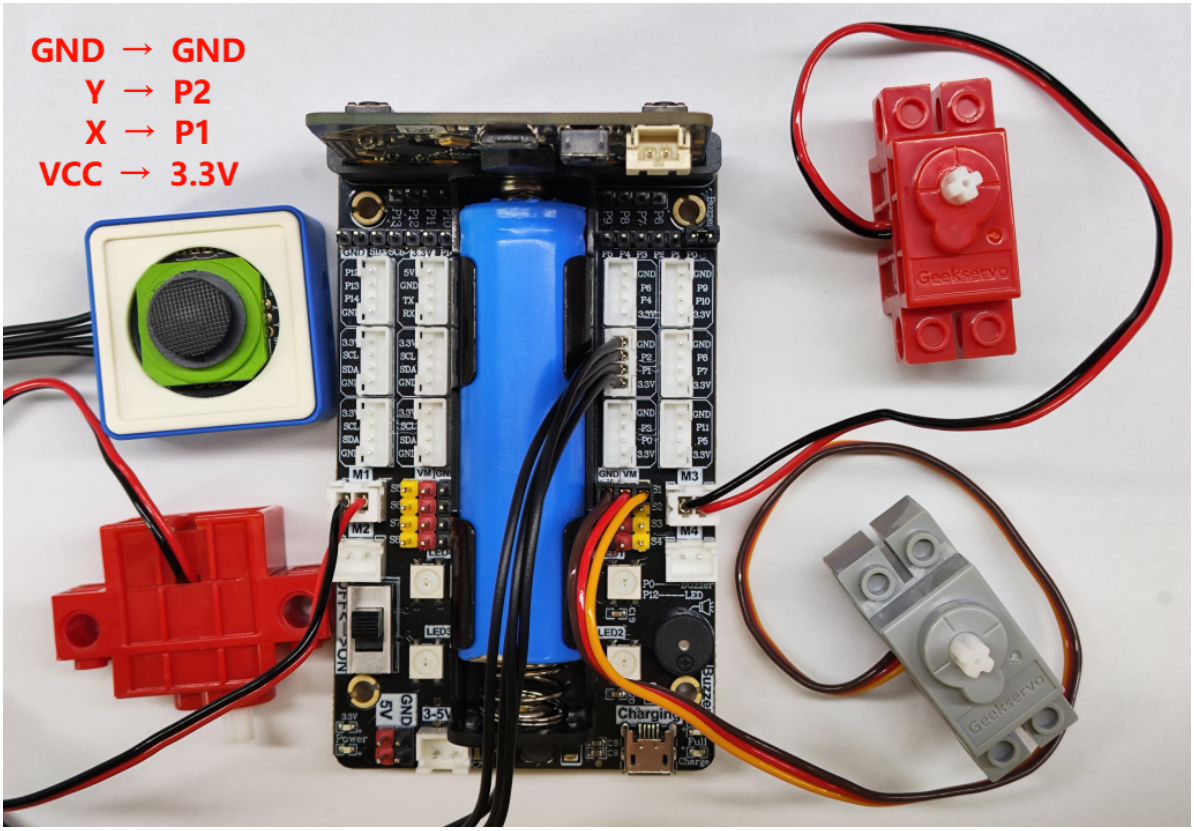
3. Sensor wiring

The motor wiring on the left side of the car is inserted into the M1 interface of the Super:bit expansion board, and the black wire is close to the battery side;

The motor wiring on the right side of the car is inserted into the M3 interface of the Super:bit expansion board, and the black wire is close to the battery side;

The building block servo wiring is inserted into the S1 interface of the Super:bit expansion board, and the orange servo wiring is inserted into the yellow pin of S1;

The joystick module is connected to the P1P2 interface.



4. Programming

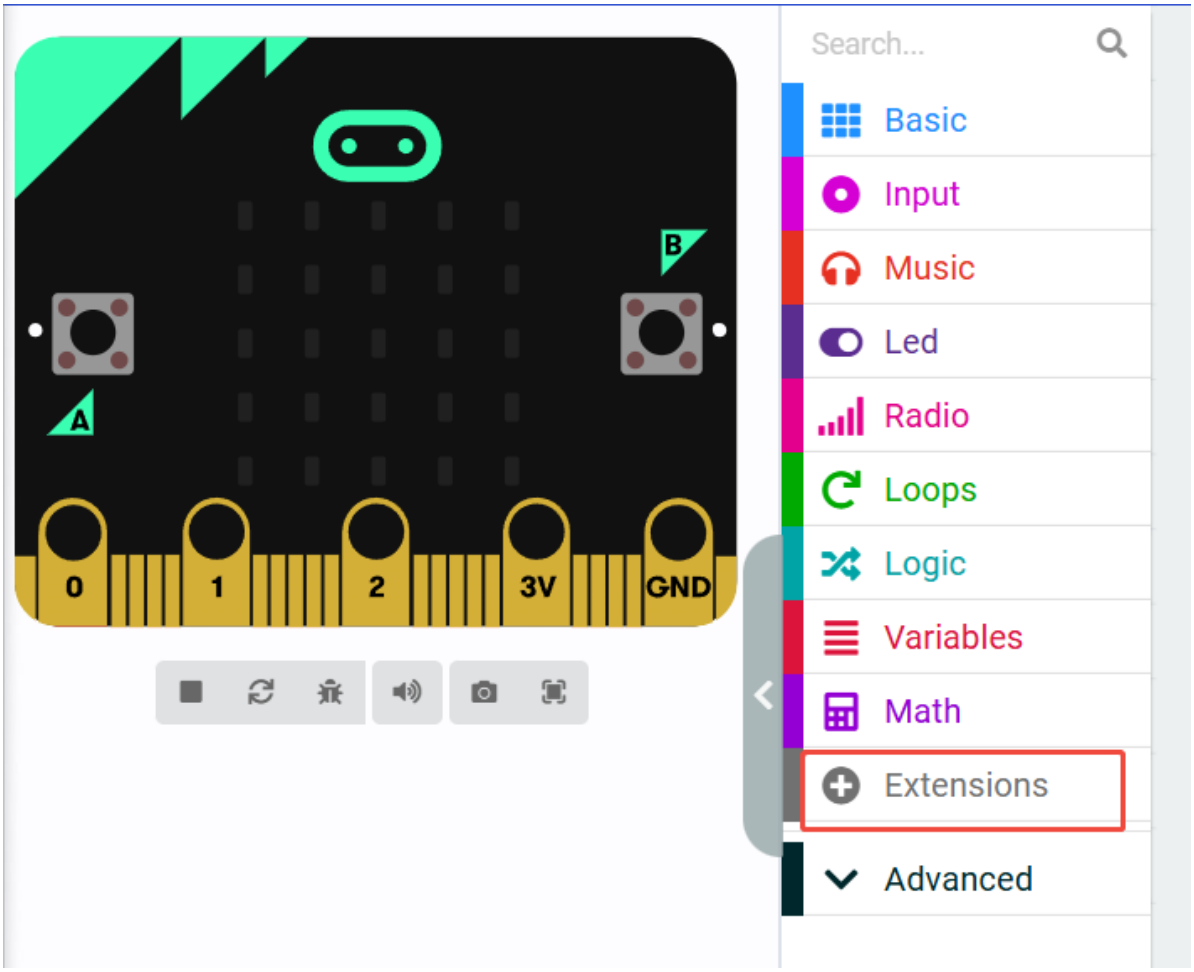
Method 1 Online Programming:

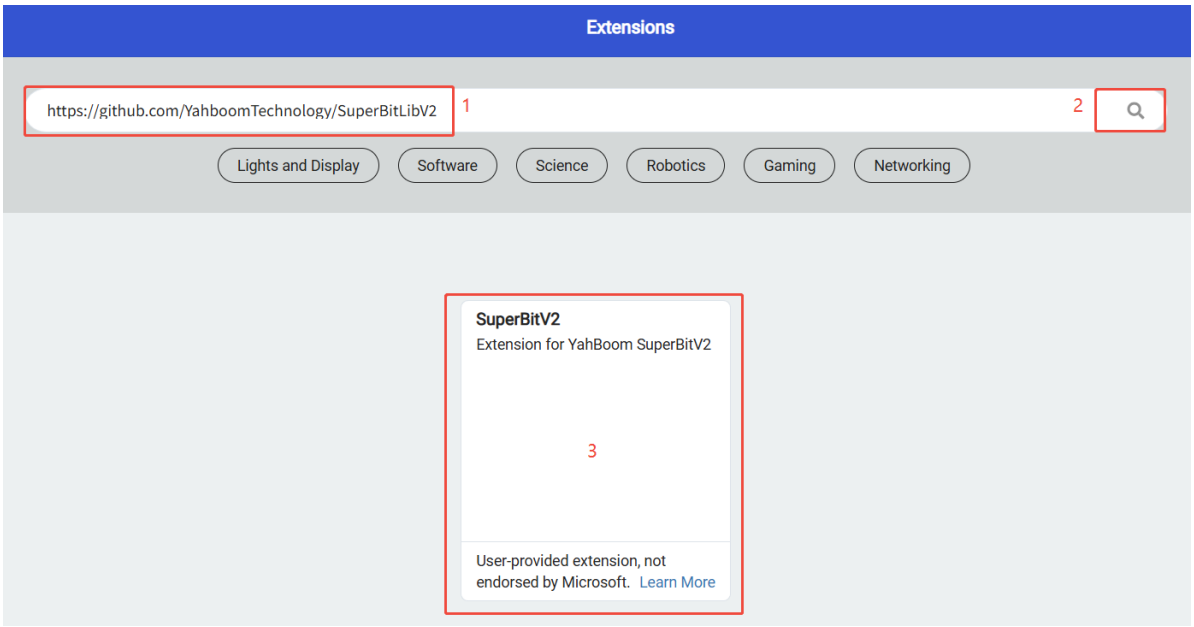
First, connect micro:bit to the computer via a USB data cable. The computer will pop up a U disk. Click the URL in the U disk: https://makecode.microbit.org/ to enter the programming interface. Then, add the Yahboom software package **https://github.com/YahboomTechnology/SuperBitLibV2** to start programming.

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.

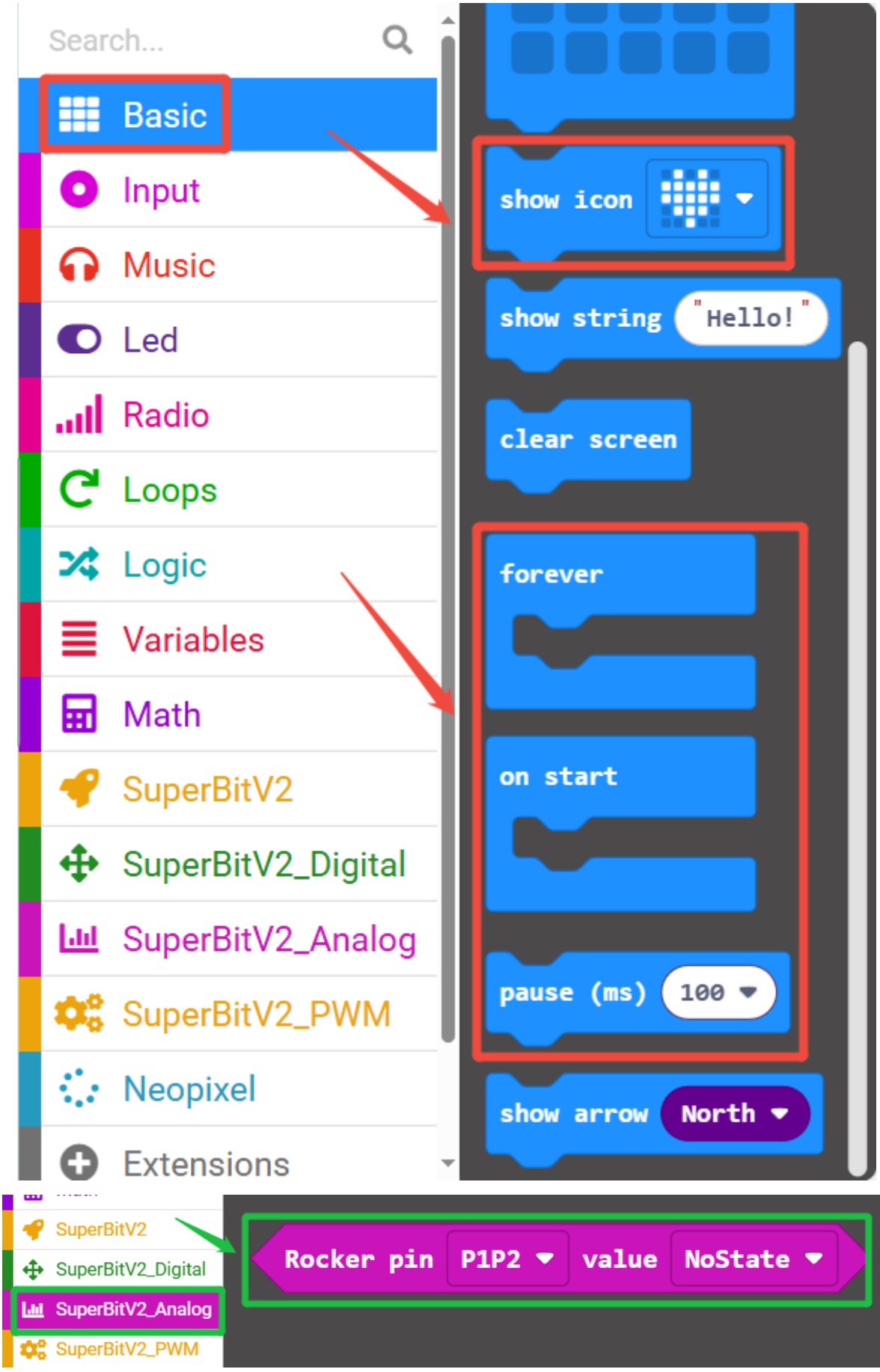
4.1 Adding extension packs





4.2 Building blocks used

The locations of the building blocks required for this programming are shown in the figure below.


Search...
Basic
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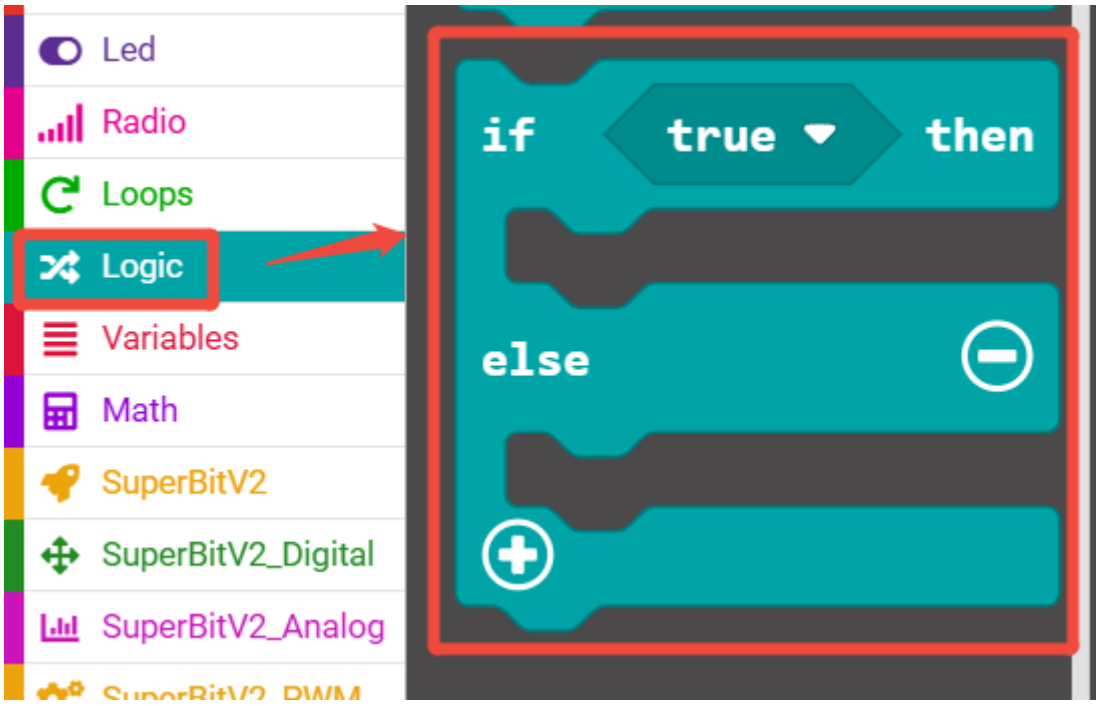
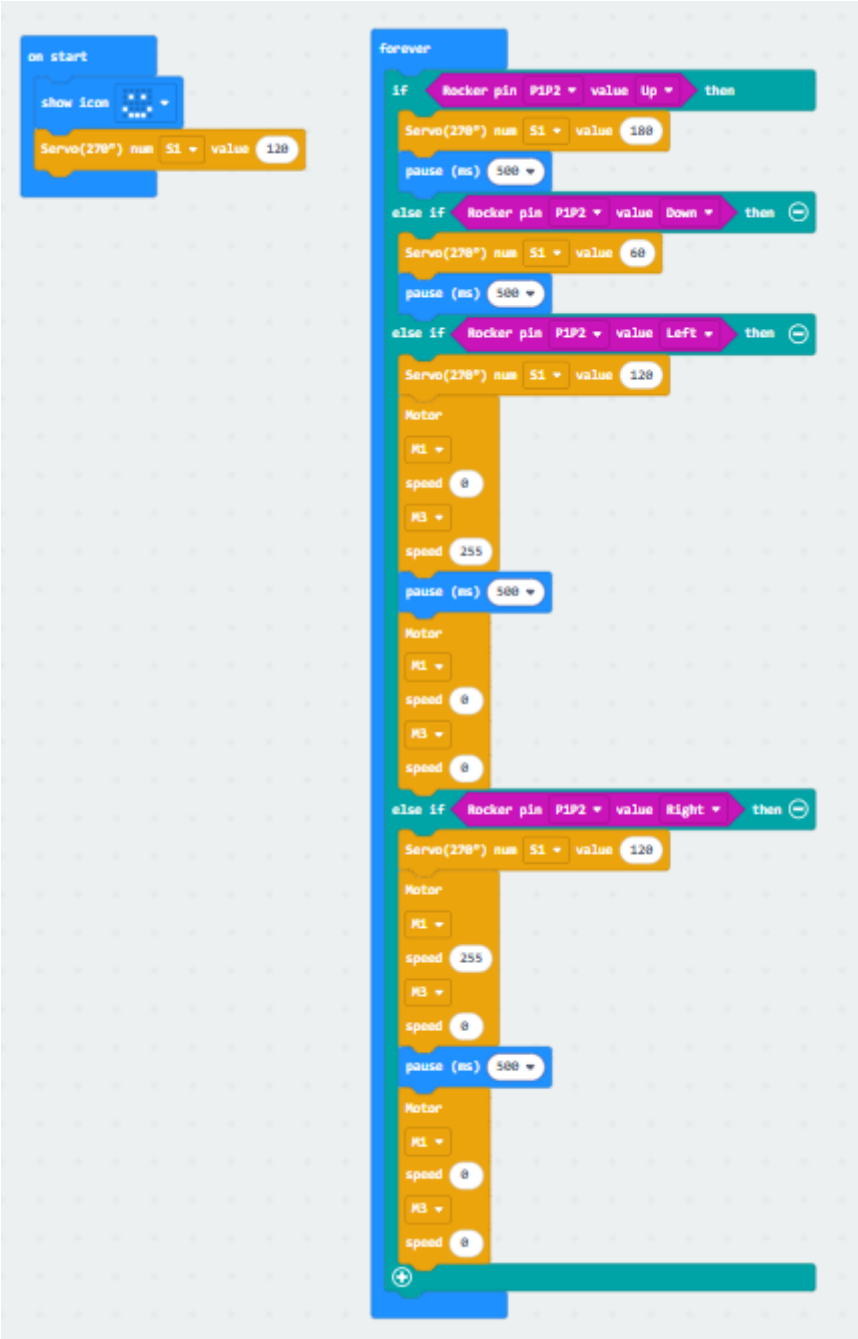
Music
Led
Radio
Loops
Logic
Variables
Math
SuperBitV2
SuperBitV2_Digital
SuperBitV2_Analog
SuperBitV2_PWM
Neopixel
Extensions
show icon
show string "Hello!"
clear screen
forever
on start
pause (ms) 100
show arrow North

SuperBitV2
SuperBitV2_Digital
SuperBitV2_Analog
SuperBitV2_PWM
Rocker pin P1P2 value NoState



4.3 Combining blocks

The summary program is shown in the figure below.



You can also directly open the **Rocker-carrier.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.

5. Experimental phenomenon

After the program runs successfully, the microbit dot matrix will display a smiley face. Turn on the power switch, and the servo will initialize and level. The shovel is lifted when the joystick is up, the shovel unloads the cargo when the joystick is down, the shovel is reset to the left and the car turns left, and the shovel is reset to the right and the car turns right.