

Remote control iron claw car

Goal

In this lesson, we will learn how to use the emakefun infrared remote control to control the Magic_Car iron claw car

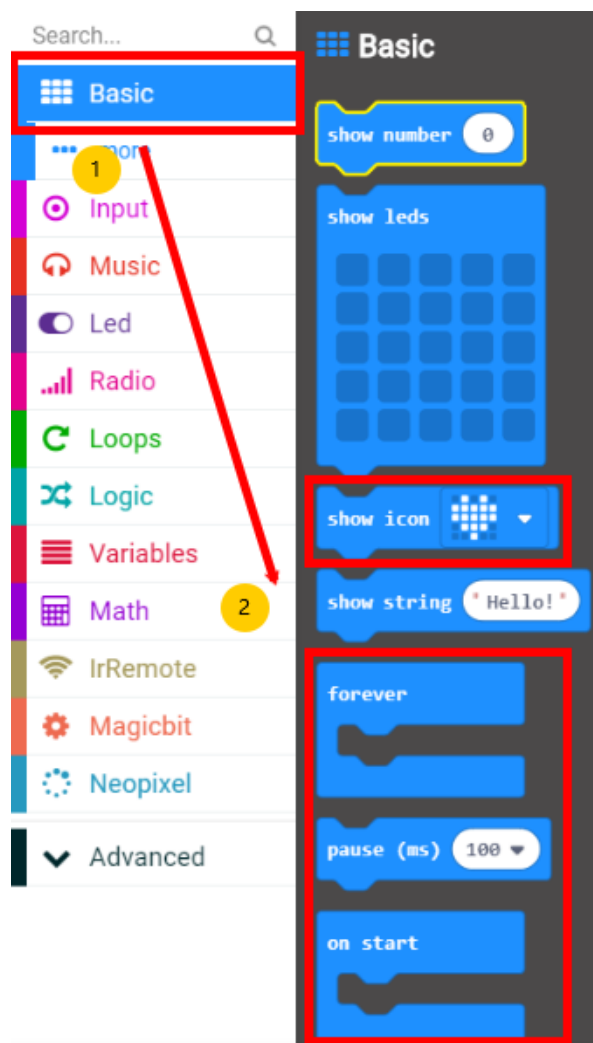
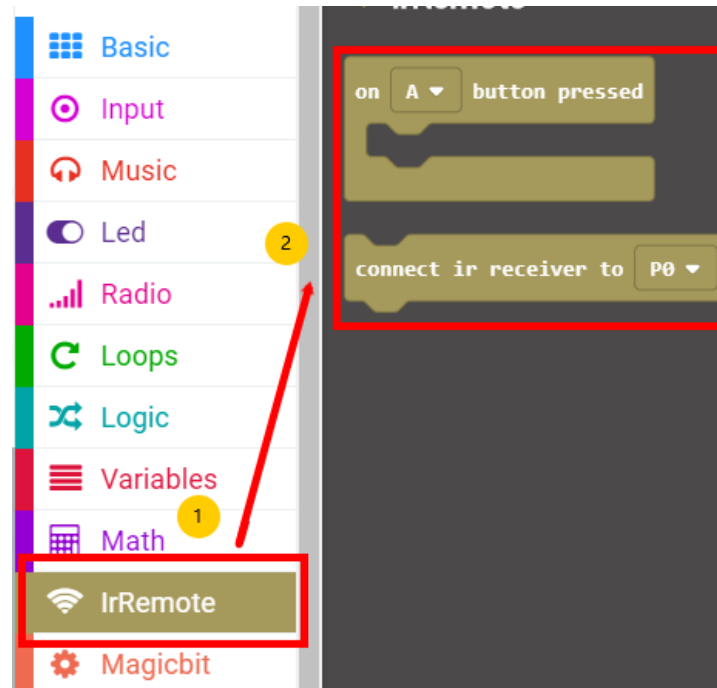
Programming method

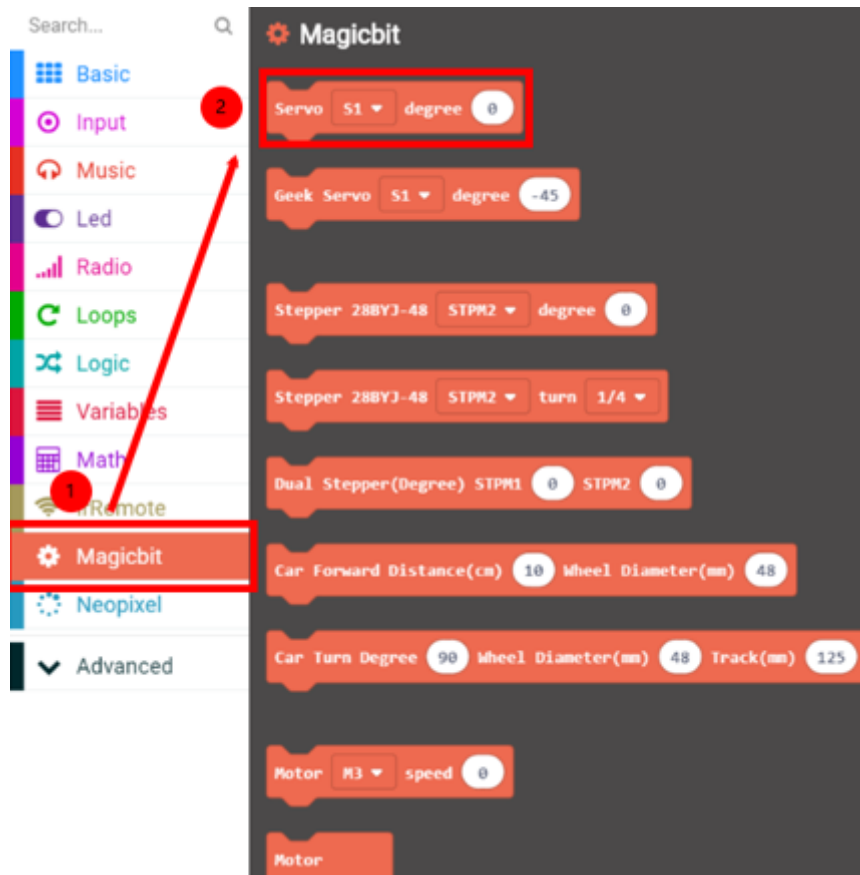
(1) online programming: connect micro:bit with the computer through the USB cable, open my computer, find the MICROBIT memory and open it, double-click MICROBIT.HTM, and open the browser programming page. After creating a new project, click advanced, click expand, enter the extension package address <https://github.com/emakefun/pxt-magicbit.git> enter enter or search, add the Microbit extension package, and you can start programming the car

(2) offline programming: open the offline programming software, enter the programming interface, create a new project, click advanced, click expand, enter the address of the extension package <https://github.com/emakefun/pxt-magicbit.git> and press enter or search, add the Microbit extension package, and then you can start programming and control the car.

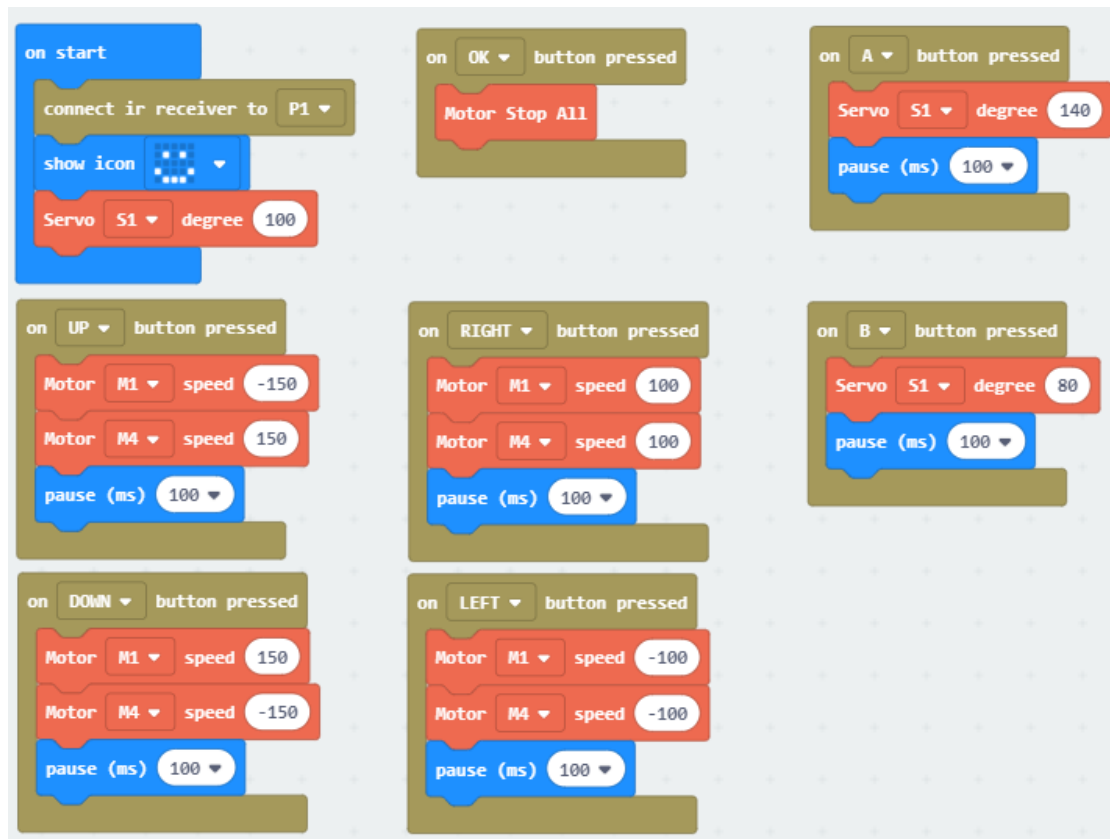
Block programming

1. Location of building blocks required





1、 Final program building block combination



Wiring

1. Connection of steering gear;

The car steering gear is connected to the S1 pin of the PWM steering gear of the expansion board, in which the yellow line of the steering gear is connected to the blue pin of the expansion board, the red line of the steering gear is connected to the red pin of the control board, and the brown line of the steering gear is connected to the black GND pin of the control board.

2. Motor connection;

The motor to the left of the car is connected to the extension board M4 interface

The motor to the right of the car is connected to the expanded M1 interface

3. Jumper cap of infrared receiving head;

The jumper cap between the infrared receiver of the control board and the buzzer should be inserted well, otherwise the infrared receiver cannot be used, the default is installed.

The experimental results

After downloading the program to the micro:bit motherboard of Magic_Car car, open the main switch of the expansion board. Microbit displays a smiling face. When the button up of the remote control is pressed, the iron claw car will advance. When the DOWN

button of the remote control is pressed, the iron-clawed car will back up. When the LEFT button of the remote control is pressed, the iron claw car will turn LEFT; When the RIGHT button of the remote control is pressed, the iron claw will turn RIGHT. When the button A or B of the remote control is pressed, the claws of the iron claw car will turn to the corresponding opening degree. In actual operation, the Angle of the steering gear can be adjusted to adjust the tension degree of the claws.