

Dancing iron claw car

Goal

In this lesson, we will learn to control the steering gear, motor and RGB lamp of Magic_Car's iron claw car to realize the dance of iron claw car.

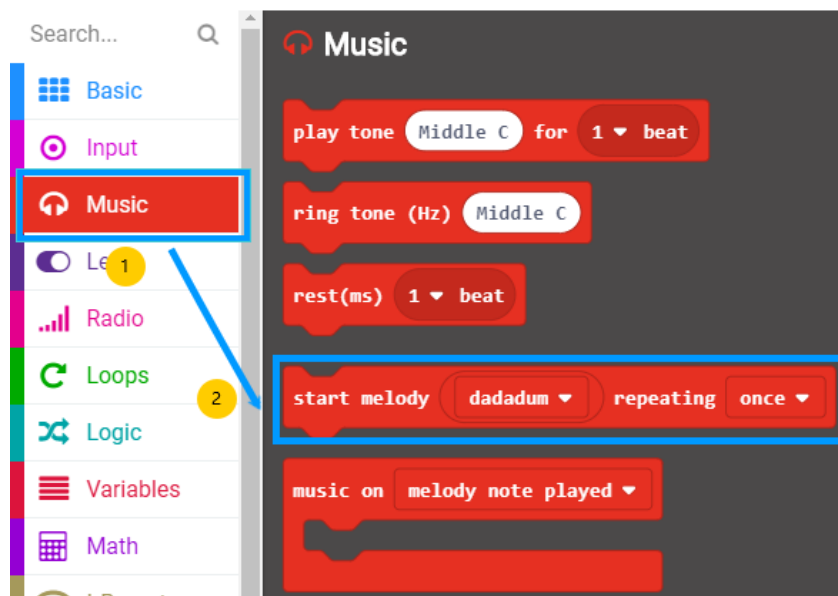
Programming method

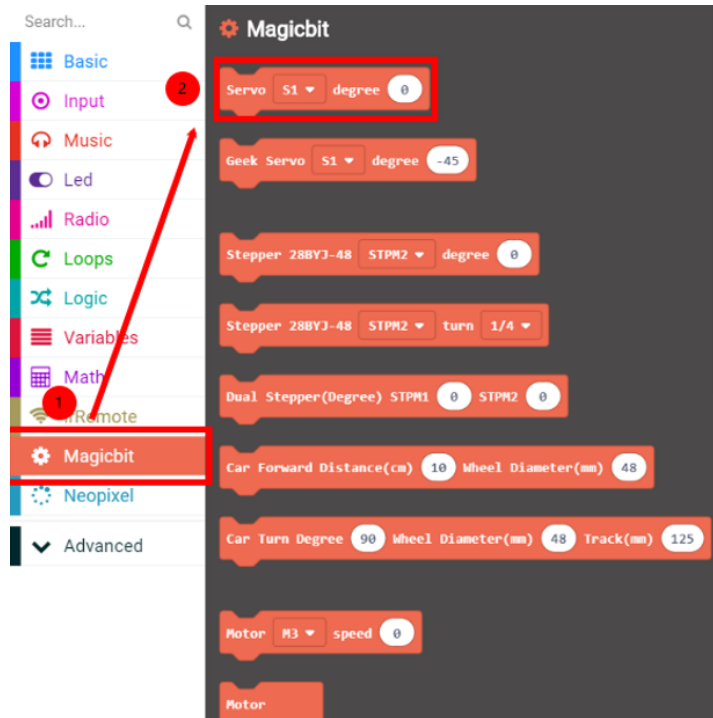
(1) online programming: connect micro:bit with the computer through the USB cable, open my computer, find the MICROBIT memory disk and open it, double-click MICROBIT.HTM, and open the browser programming page. After creating a new project, click advanced, click expand, enter the extension package address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

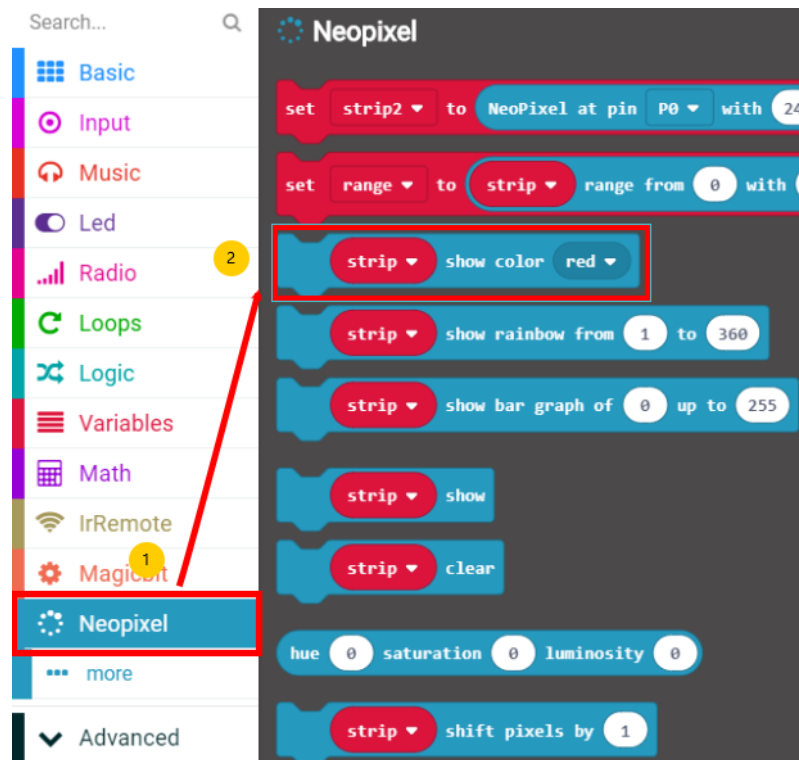
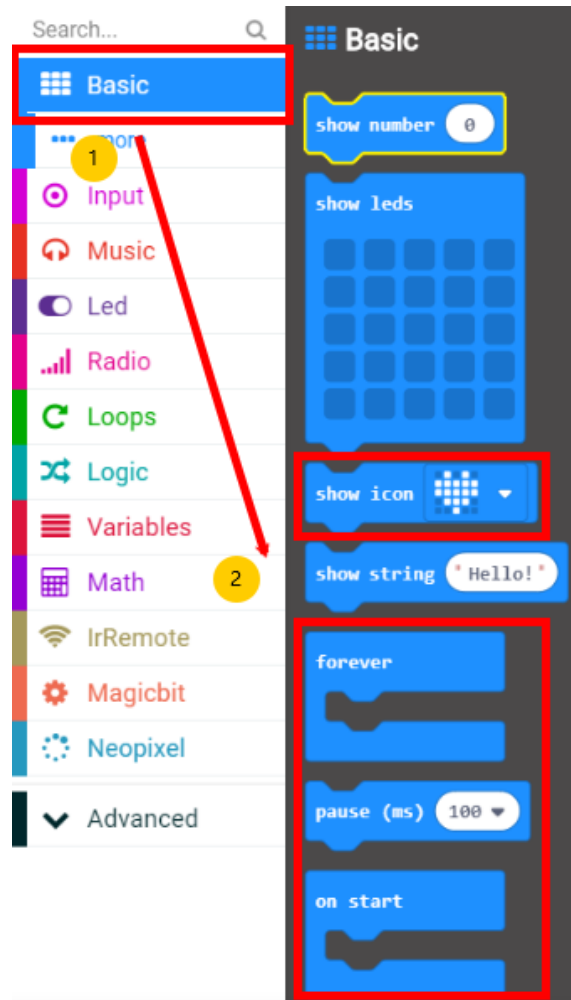
(2) offline programming: open the offline programming software, enter the programming interface, create a new project, click advanced, click expand, enter the address of the extension package <https://github.com/emadefun/pxt-magicbit.git>, and press enter or search, add the Microbit extension package,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

Programming method

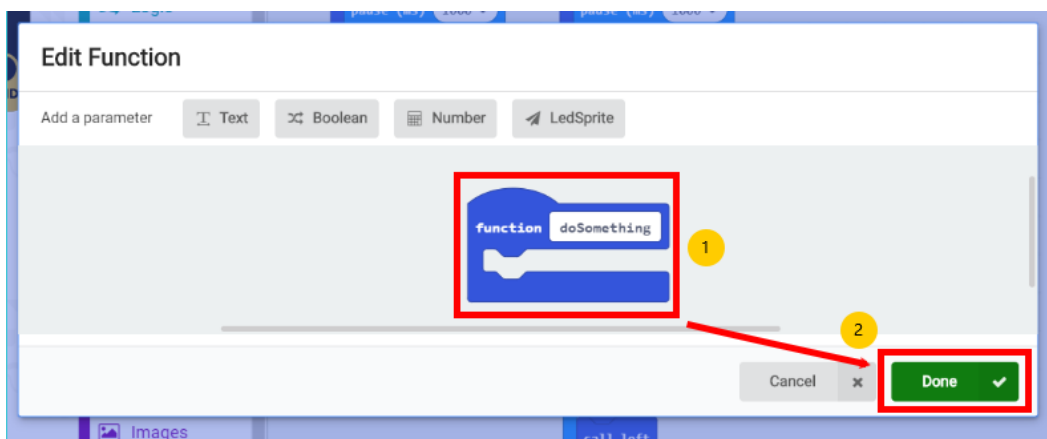
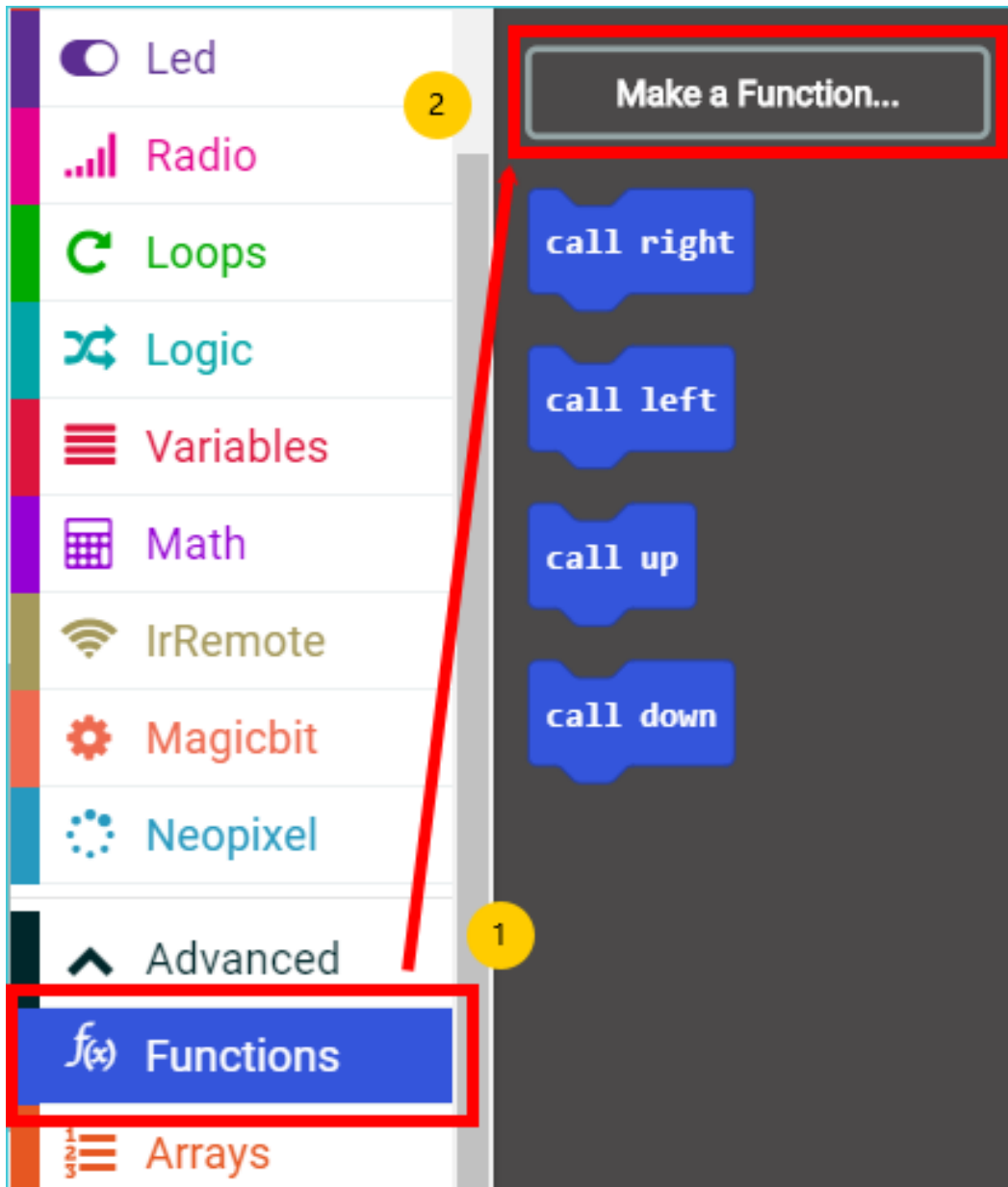
1、Location of building blocks required



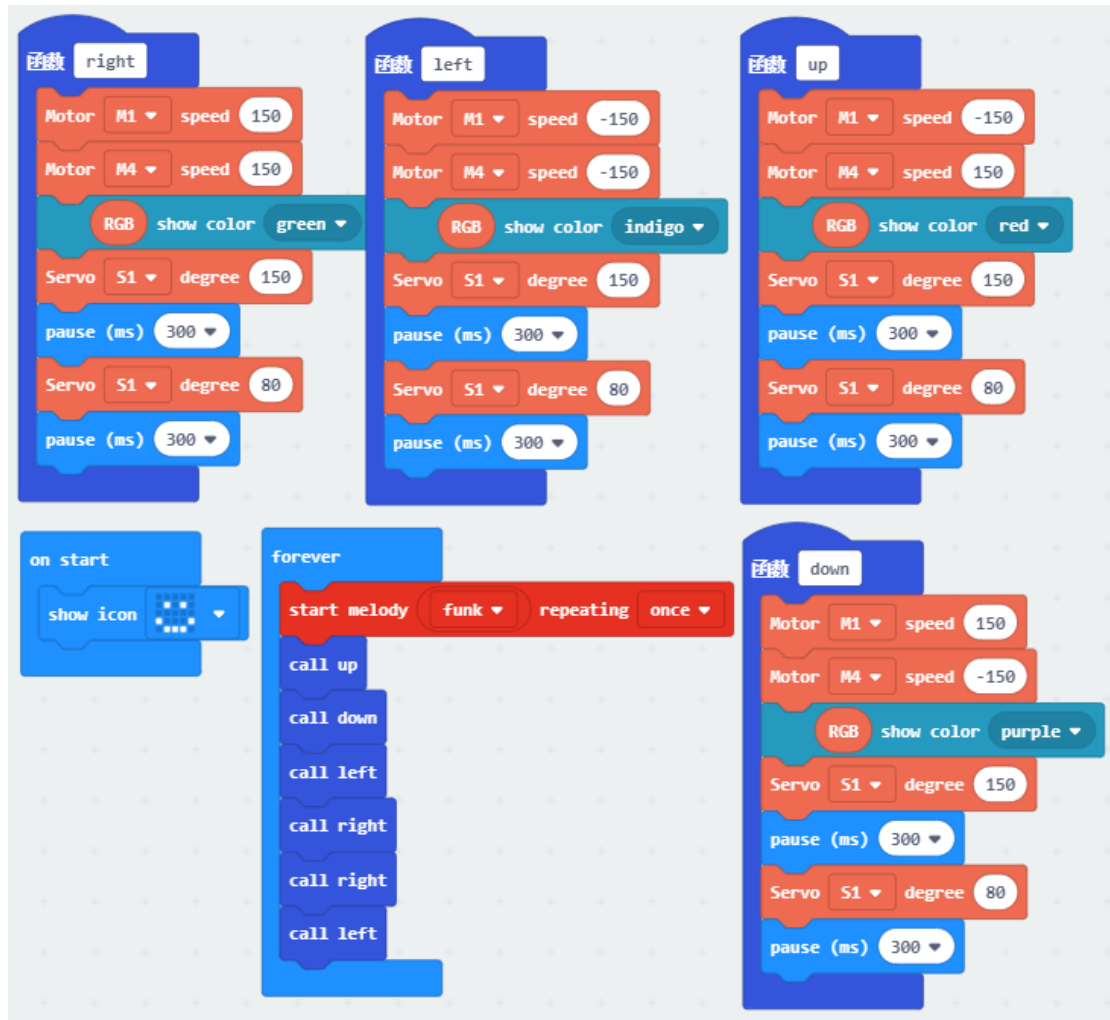




2、Create function blocks



2、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

The experimental results

Download program to Magic_Car car microbit motherboard, open expansion board master switch, microbit show smiling face, buzzer will play a funk, and then Magic_Car iron claw car forward, backward, turn left, turn right, turn right, turn left again, in the process of iron claw car mobile RGB will change color, iron claw to the front PAWS will keep open closed, so cycle.