

# Control Magic wheel car headlight

## Goal

In this lesson, we will learn to control the headlights of the Magic wheel car to make the headlights of the car flash.

Note: the positive and negative poles of the light should be clearly separated during the experiment. The positive pole should be connected to 3.3v, and the negative pole should be connected to IO pin. The IO pin actually connected corresponds to the pin selected in the program. It is not recommended to be attached to P0, P1 pins because these two pins are occupied through jumper caps.

## Programming method

(1) online programming: connect micro:bi with the computer through the USB cable, open my computer, find the MICROBIT memory disk and open it, double-click ICROBIT.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> and press enter or search, add the Microbit extension package, you can start programming control car RGB light .

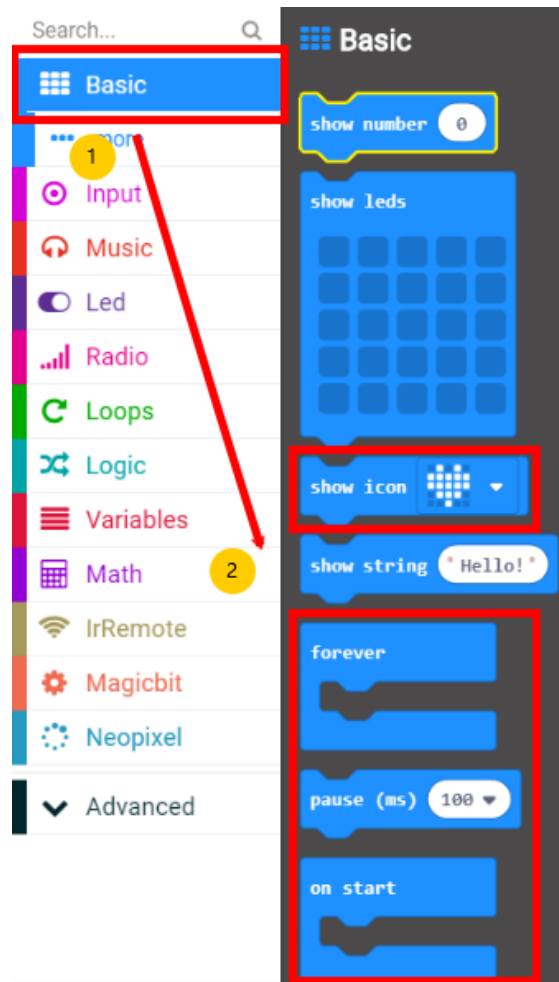
(2) offline programming: open the offline programming software, enter the programming interface, create a new project, click advanced, click expand, enter the address <https://github.com/emakefun/pxt-magicbit.git> of the extension package, press enter or search, add the Microbit extension package, and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

## RGB lamp principle

Car headlight is by controlling the LED light negative line potential to control the lights on and off. Generally speaking, when the program set the negative line of the light to 0, "the lamp" is on, and when the program set the negative line of the light to 1, "the light" is off.

## Block programming

- 1 Location of building blocks required



## 1、Final program building block combination



## Wiring

Magic wheel-wheel car has two colorful headlights, which can be changed to different colors by changing the round fasteners of the headlights. The red line of the headlight is connected to the red 3.3v pin of the extension board and the black line is connected to the P8 pin of the IO port: the red line of the other headlight is also connected to the red 3.3v pin of the extension board and the black line is connected to the P12 pin of the IO port.

## The experimental results

After downloading the program to the microbit motherboard of the Magic wheel car, open the main switch of the expansion board, the microbit will display a smiley face, and the big lamp of the Magic wheel car will flash at an interval of 500ms.