

#### Wristbit control Omni:bit car

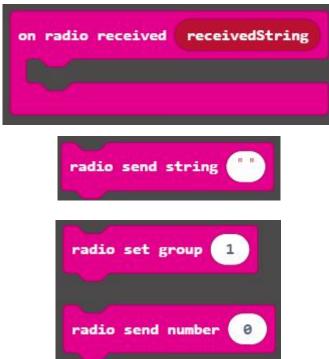
## 1. Learning goals

In this lesson, we will learn to use Wrist:bit control Omni:bit car.

# 2. Working principle

This course mainly uses the networking function of micro:bit to realize communication between two micro:bit motherboards. The two microbits need to be set in the same group, and the receivedStrings of the two receive the characters from the other to communicate.

In this course, we mainly use the building blocks shown in the figure below.



#### 3. Programming method

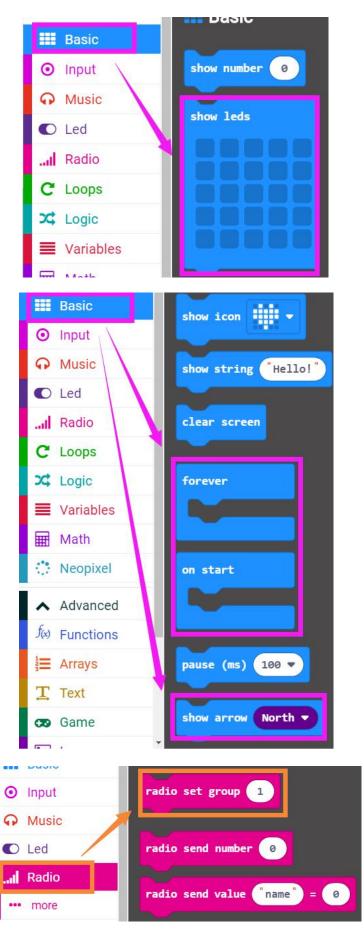
**Mode 1 online programming:** First, we need to connect the micro:bit to the computer by USB cable. The computer will pop up a USB flash drive and click on the URL in the USB flash drive: <a href="http://microbit.org/">http://microbit.org/</a> to enter the programming interface to program.

**Mode 2 offline programming:** We need to open the offline programming software. After the installation is complete, enter the programming interface, click \( \bigcup \) New Project \( \bigcup \) , you can program.

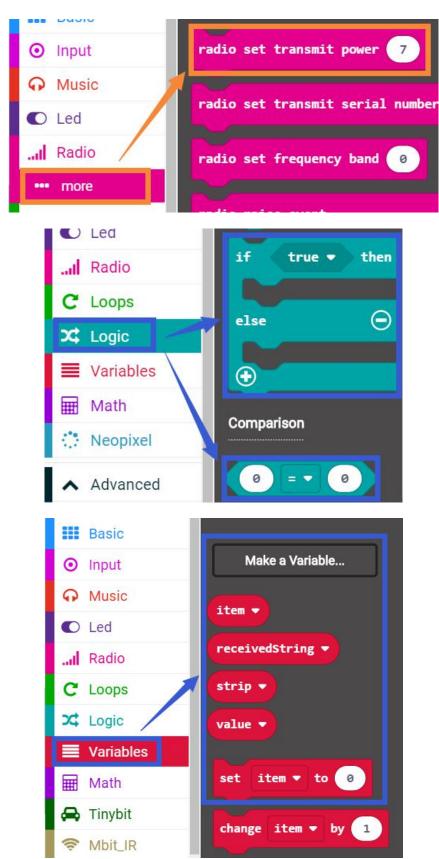
## 4. Looking for blocks

The following is the location of the building blocks required for this programming.

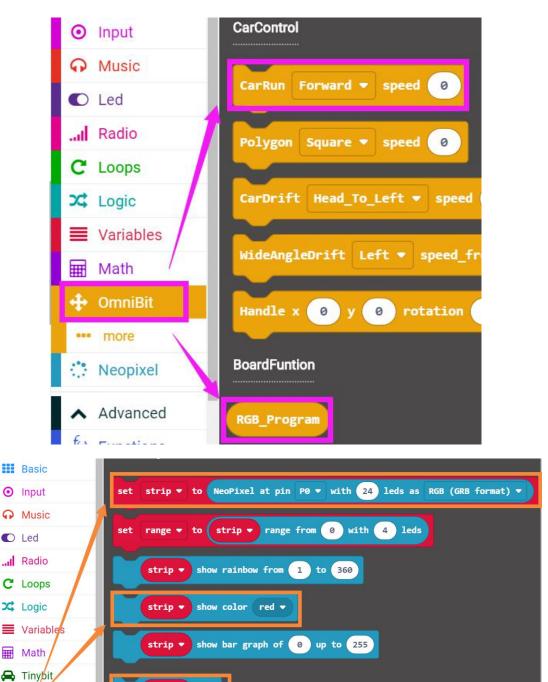












#### 5. Combine block

Mbit\_IR-

••• more

Omni:bit car code as shown below.

strip ▼ show

strip ▼

clear



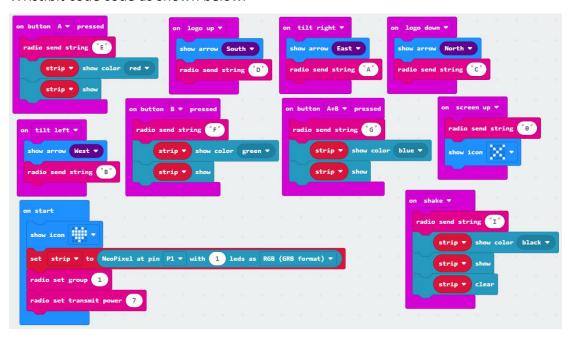


```
on radio received receivedString
 set value ▼ to receivedString
       compare value ▼ to "A"
  CarRun Forward ▼ speed 150
          compare value ▼ to "B"
                                   = - 0
                                               then 🖃
 else if
  CarRun Back ▼ speed 150
 else if
          compare value ▼ to "C" = ▼ 0
                                               then 🖃
  CarRun Spin_Left ▼ speed 150
                                               then 😑
 else if compare value ▼ to "D"
                                   = - 0
  CarRun Spin_Right ▼ speed 150
 else if
          compare value ▼ to "I" = ▼ 0
                                               then 🖃
       RGB_Program show color black ▼
       RGB_Program show
       RGB_Program clear
```



```
value ▼ to "E"
                                   = 🔻 (0)
                                                then 🕣
else if
      RGB_Program
                 show color red ▼
 CarRun MoveLeft ▼ speed 150
                                   = - 0
          compare value ▼ to "F"
                                                then 🛑
else if
      RGB_Program
                 show color green ▼
 CarRun MoveRight ▼ speed 150
          compare value ▼ to "G"
                                   = - (0)
                                                then 🖃
else if
      RGB_Program
                 show color blue ▼
 WideAngleDrift Left ▼ speed_front 50 speed_back 150
else if
                  value ▼ to "0"
                                                then 🖃
 CarRun CarStop ▼ speed 0
⊕
```

Wrist:bit code code as shown below.



# 6. Experimental phenomena

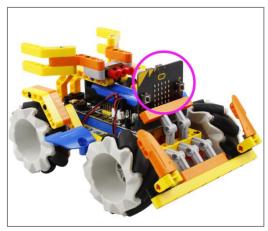
We need to download microbit-Omnibit-code.hex file into micro:bit board of



#### Omni:bit car.

# We need to download microbit-Wristbit-code.hex file into micro:bit board of Wristbit.





After the program is successfully downloaded. Take wrist: bit on your left wrist as shown below.



Omni:bit car dot matrix of will display a smile. Wrist:bit dot matrix will display a heart pattern.

if the wrist:bit is facing upward, car will stop;

if the micro:bit tilt left, the micro:bit dot matrix display arrow points to west, car will back;

if the micro:bit tilt right, the micro:bit dot matrix display arrow points to the east, car will advance;

If the micro:bit logo up, micro:bit dot matrix display points to the south, car will spin left;

if the micro:bit logo down, micro:bit dot matrix display points to the north, car will spin right;

if we press the button A, the RGB lights of the Wrist:bit and the car will become red. When we press button B, the RGB lights of the Wrist:bit and the car will become green.

if we press the A and B buttons at the same time, the RGB lights of the Wrist:bit and the car will become blue.

if we shaking the Wrist:bit, the RGB lights of Wrist:bit and the car will off.

