Yahboom Tiny:bit MicroPython API

Input this code to import Yahboom Tiny:bit Micropython library： **import tinybit**

1、**Car advance** **tinybit.car_HeadRGB(a, b, c)**

Description of Parameter:

a is red value,range is 0-255.

b is green value,range is 0-255.

c is blue value,range is 0-255.

Eg: tinybit.car_HeadRGB(255, 255, 255) //The RGB search light will become white

2、Car advance

method1: **tinybit.car_run(s)**

method2: **tinybit.car_run(a, b)**

Function: Control the car advance

One parameter:

A single parameter s, set the speed of the two motors of the car, range: 0 ~ 255

Two parameters:

a is left motor speed,range is 0-255.

b is right motor speed,range is 0-255.

Eg1: tinybit.car_run(255) // The car will run with 255 speed

Eg2: tinybit.car_run(255, 255) // The car will run with 255 speed

3、Car back

method1: **tinybit.car_back(a)**

method2: **tinybit.car_back(a, b)**

Function: Control the car back

One parameter:

A single parameter s is the speed of the two motors of the car, range: 0 ~ 255

Two parameters:

a is left motor speed,range is 0-255.

b is right motor speed,range is 0-255.

Eg1: tinybit.car_back(255) // The car will back with 255 speed

Eg2: tinybit.car_back(255, 255) //The car will back with 255 speed

4、Car turn left **tinybit.car_left(a)**

Function: Control the car turn left

Parameter:

a is the speed of right motor of the car, range: 0 ~ 255

!Note: car turn left is left wheel stop and right wheel advance,so we only input right speed.

Eg: tinybit.car_left(255) // The car will turn left with 255 speed

5、Car turn right **tinybit.car_right(a)**

Function: Control the car turn right

Parameter:

a is the speed of left motor of the car, range: 0 ~ 255

!Note: car turn left is right wheel stop and left wheel advance,so we only input left speed.

Eg: tinybit.car_right(255) // The car will turn right with 255 speed

6、Car spin left

method1: **tinybit.car_spinleft(s)**

method2: **tinybit.car_spinleft(a,b)**

Function: Control the car spin left

One parameter:

A single parameter s is the speed of the two motors of the car, range: 0 ~ 255

Two parameters:

a is left motor speed,range is 0-255.

b is right motor speed,range is 0-255.

Eg1: tinybit.car_spinleft(255) // The car will spin left with 255 speed

Eg2: tinybit.car_spinleft(255, 255) //The car will spin right with 255 speed

7、Car spin right

method1: **tinybit.car_spinright(s)**

method2: **tinybit.car_spinright(a,b)**

Function: Control the car spin right

One parameter:

A single parameter s is the speed of the two motors of the car, range: 0 ~ 255

Two parameters:

a is left motor speed,range is 0-255.

b is right motor speed,range is 0-255.

Eg1: tinybit.car_spinright(255) // The car will spin right with 255 speed

Eg2: tinybit.car_spinright(255, 255) //The car will spin right with 255 speed

8、Car stop tinybit.car_stop()

Function: Control the car stop

9、RGB search light tinybit.setMotorPWM(a, b, c)

Function: Set motor PWM value

Parameters:

a: the left motor speed (-255 ~ 255), positive number is forward, negative number is backward, zero is stop

b: the right motor speed (-255 ~ 255), positive number is forward, negative number is backward, zero is stop

c: delay time (ms)

Eg: tinybit.car_setMotorPWM(255, -255, 1000) //Left motor rotates forward, right motor rotates reverse 1000ms with 255 speed.

10、Ultrasonic module return distance **tinybit.ultrasonic()**
Function: returns the current distance detected by the ultrasonic module(cm).

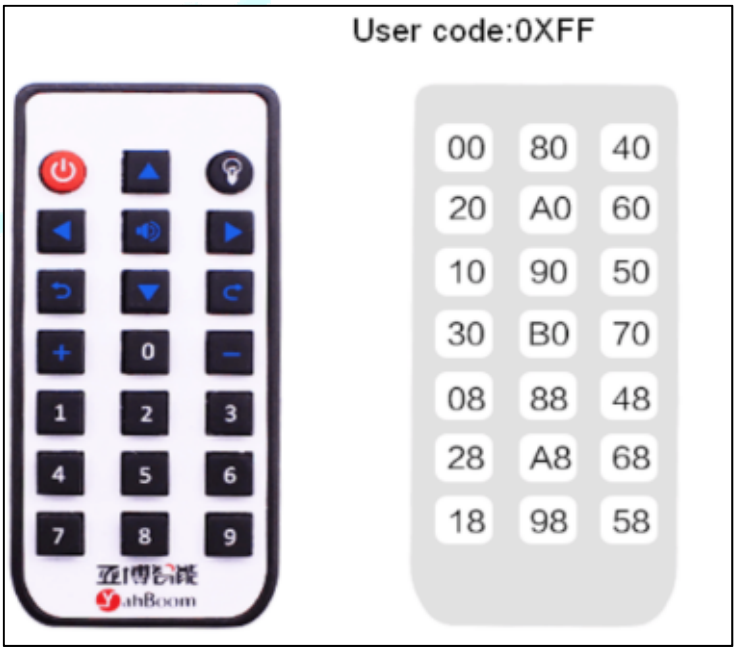
11、Left tracking sensor **tinybit.traking_sensor_L()**
Return value: if black lines are detected returns true, if white lines are detected return false.

12、Right tracking sensor **tinybit.traking_sensor_R()**
Return value: if black lines are detected returns true, if white lines are detected return false.

13、Voice sensor **tinybit.getVoicedata()**
Function: Get the value of the sound sensor

14、IR control **tinybit.init_IR(a)**
Function: Initialize infrared remote receiver
Parameter:
a is pin of the infrared receiver
!Note: For building:bit, we need to select pin8
Eg: tinybit.init_IR(pin8)

15、Return button value of IR controller **tinybit.get_IR(IR_pin)**
Parameter:
a is pin of the infrared receiver
!Note: For building:bit, we need to select pin8
Eg: tinybit.get_IR(pin8)



16、Input this code to import Yahboom Tiny:bit Micropython library：**import ghandle**

ghandle.B1_is_pressed()
Function: Key B1 (red), press to return to True, release to return to False

ghandle.B2_is_pressed()
Function: Key B2 (green), press to return to True, release to return to False

ghandle.B3_is_pressed()
Function: Key B3 (blue), press to return to True, release to return to False

ghandle.B4_is_pressed()
Function: Key B4 (yellow), press to return to True, release to return to False

ghandle.rocker(state)
Function: Detect the joystick direction, if it is consistent with the parameter return True , if it is inconsistent with the parameter return False
Parameters: state indicates the status of the rocker

ghandle.up --- rocker up
ghandle.down --- rocker down
ghandle.left --- rocker left
ghandle.right --- rocker right
ghandle.pressed --- rocker be pressed
ghandle.noState --- no any operation

ghandle.get_value_x()
Function: Returns the analog value of the X channel of the rocker. The value will change when moving left and right. It increases to the left and decreases to the right.

ghandle.get_value_y()
Function: Returns the analog value of the Y channel of the rocker. The value will change when moving up and down. It increases to the down and decreases to the up.