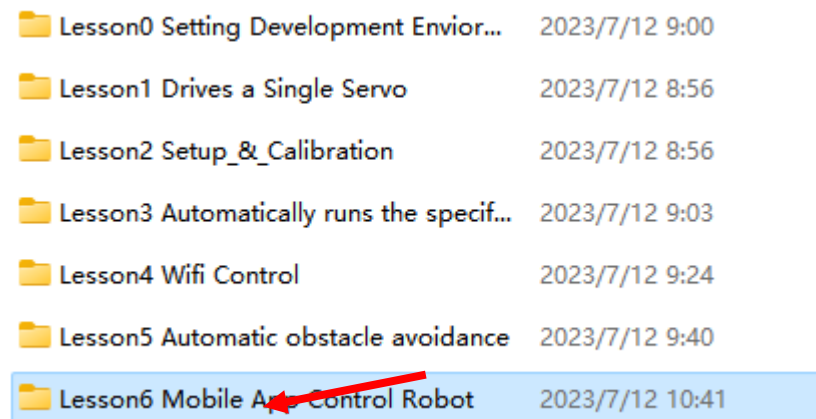


# 1. Mobile phone APP control

## 1.1. Open the source code

Open the information package we provide, locate to the "Course 7 Mobile APP Control Q uad Bot\_T \_ESP D" folder, and double-click Q uad Bot\_T \_ESP D. And ino, open the source code.→→



## 1.2. To compile the source code

Click the 1 compile button as shown in the figure below. If there is no problem, the compilation completion prompt in 2 appears.



```
1 #include <soc/soc.h>
2 #include <soc/rtc_cntl_reg.h>
3 #include <soc/rtc_wdt.h> //设置看门狗用
4 #include <Wire.h>
5 #include <WiFi.h>
6 #include <WiFiClient.h>
7 #include <WiFiAP.h>
8 #include <ESP32Servo.h>
9 #include <BluetoothSerial.h>
10 #include "EEPROM.h"
11
12 #define Addr 0x1C
13 #define SDA 18
14 #define SCL 19
15
16 #define EEPROM_SIZE 64
17
18 /* Servos -----*/
19 //define 12 servos for 4 legs
20 Servo servo[4][3];
21 //define servos' ports
22 const int servo_pin[4][3] = {{18, 5, 19}, { 2, 4, 15}, {33, 25, 32}, {27, 14, 13}};
23 const int offset[4][3] = {{ 0, 0, 0}, { 0, 0, 0}, { 0, 0, 0}, { 0, 0, 0}};
24 /* Size of the robot -----*/
25 const float length_a = 55;
26 const float length_b = 77.5;
27 const float length_c = 27.5;
28 const float length_side = 71;
29 const float z_absolute = -28;
30 /* Constants for movement -----*/
31 const float z_default = -50, z_up = -30, z_boot = z_absolute;
32 const float x_default = 62, x_offset = 0;
33 const float y_start = 0, y_step = 40;
34 const float v_default = x_default;
```

Done compiling.

Sketch uses 725478 bytes (55%) of program storage space. Maximum is 1310720 bytes.

Global variables use 40204 bytes (12%) of dynamic memory, leaving 287476 bytes for local variables. Maximum

1 ESP32 Dev Module, Disabled, Default 4MB with spiiffs (1.2MB APP/1.5MB SPIFFS), 240MHz (WiFi/BT), QIO, 80MHz, 4MB (32Mb), 921600, None on COM5

### 1.3. Download the program to the microcontroller

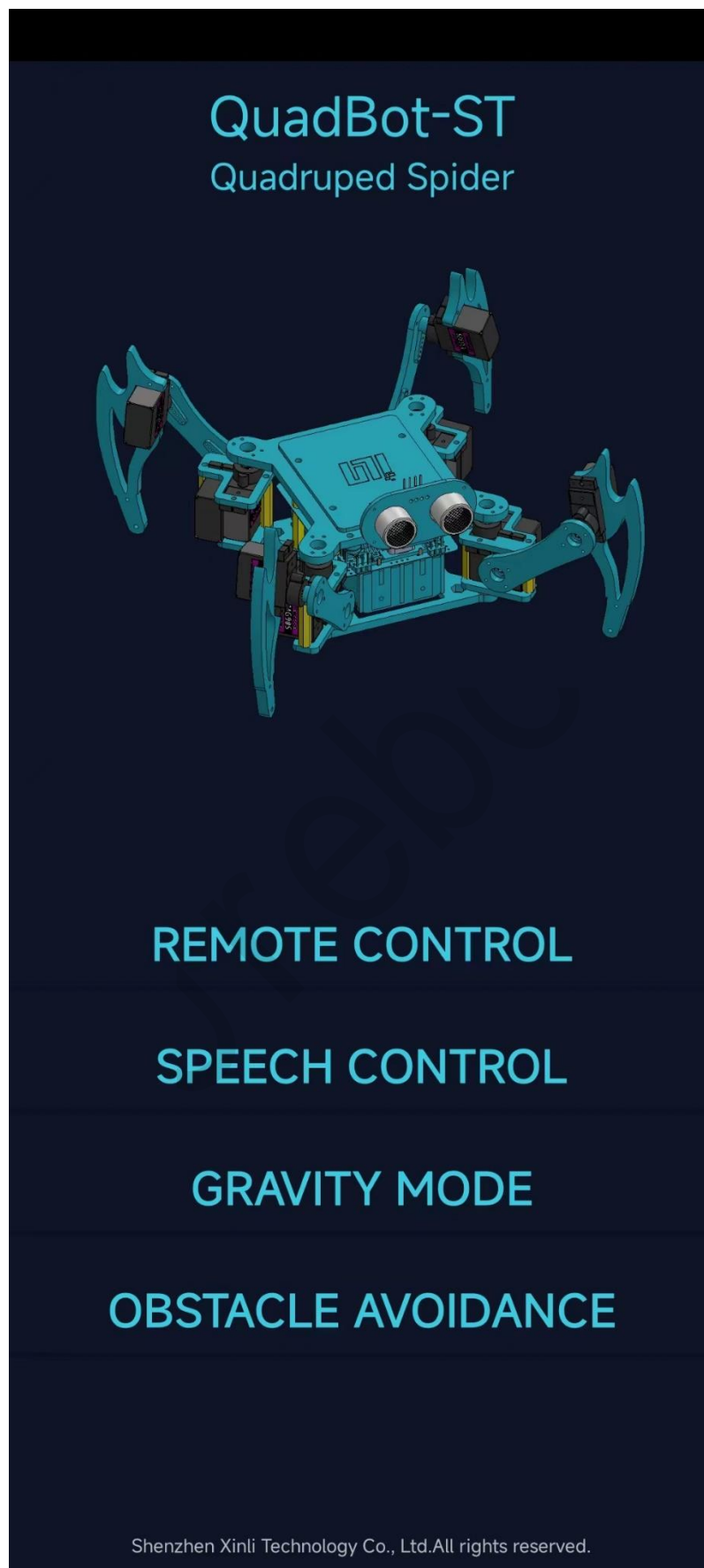
Connect the single chip computer and the computer with usb cable, select the correct COM port, and then click the 1 "download" button as shown in the figure below. If everything goes well, there will be 2 "upload successfully" prompt, so that the program is successfully downloaded, and then unplug the USB cable.



After downloading the program, turn on, open the phone WiFi, find the WiFi named Quad Bot-T in the WiFi list, click the connection, the password is 12345678, and then open the software we provide

01_ReadMeFirst	2023/7/11 11:56
02_Manual	2023/7/11 17:07
03_Tutorial_&_Code	2023/7/11 16:19
04_APP	2023/7/11 15:24
05_Schematic	2023/7/11 17:08
06_Related_chip_infomation	2023/7/11 17:09
07_Software	2023/7/11 17:13
08_Drive	2023/7/11 17:09
09_3D_Model	2023/7/11 17:10

After the software is downloaded and opened as shown in the figure below



1. Key control, which can be manually controlled

ured

# QuadBot-ST

Remote Control



Shake

Head Up

Wave

Twist Left

Head Down

Twist Right

Body Left

Body Higher

Body Right

Service

Body Lower

Reset Pos

Sit

BACK

Dance

2. Voice remote control, when you hold the microphone in the middle of the screen, and then release,

(Instruction: forward, back, turn left, turn right, look up, wave, shake hands, left twist, right twist, lift, squat, service, reset, sit, dance), the spider performs the corresponding action

Preprint

# QuadBot-E

## Speech Control

ize the word of command:

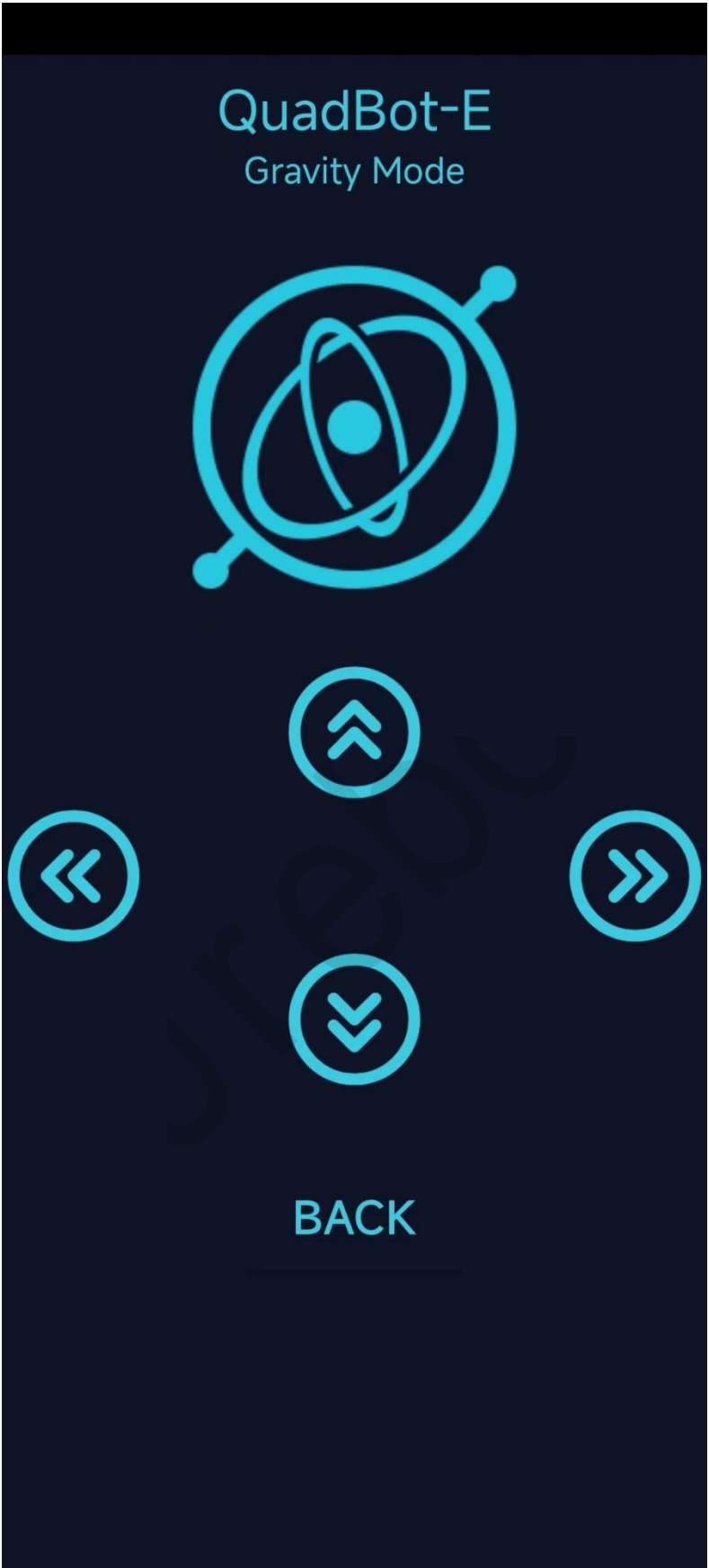
Please long press the lower  
button to speak



**BACK**

3. Gravity sensing is to control the spider to move forward, turn left and turn right by rotating the phone





4. Is testing for perfection

# QuadBot-ST

Obstacle Avoidance



START

END

BACK