

11. STM32 platform-----Bluetooth control car

1) Introduction of experimental

In this experiment, we control car by Bluetooth App by Android Mobile phone. The mobile phone sends commands through the serial port to control the advance, backward, turn left, turn right , stop, any angle control of the servo, out fire, whistle, speed of robot car.

At the same time, the status of various sensors on the robot car and the distance measured by the ultrasonic wave are displayed in real time on the Bluetooth APP interface by the serial port.

2) Experimental Steps

(1) Android users scan the following QR code by browser or search "YahboomRobot" in Play Store to download APP;

iOS users scan the following QR code by camera or search "YahboomRobot" in App Store to download APP.

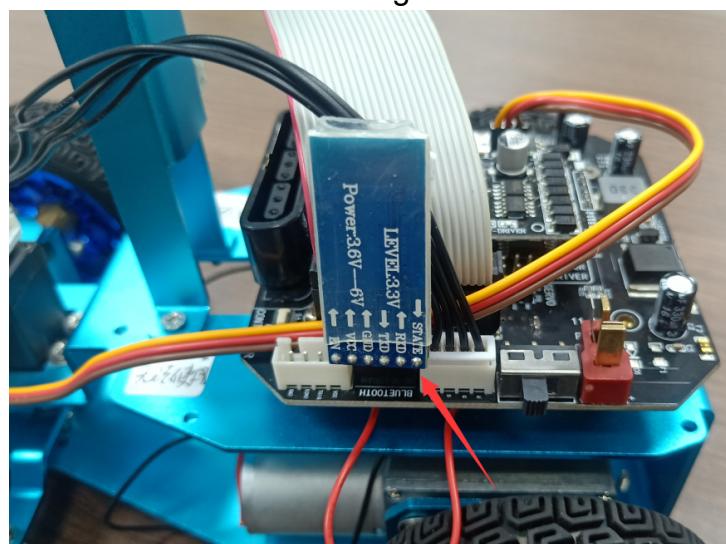
As shown in figure below.

!!Note:Because the software is relatively large, the download takes a certain amount of time, please be patient.



Note:During installation, If you find any prompts on your phone (for example: location permissions of your phone). You must select "Allow".

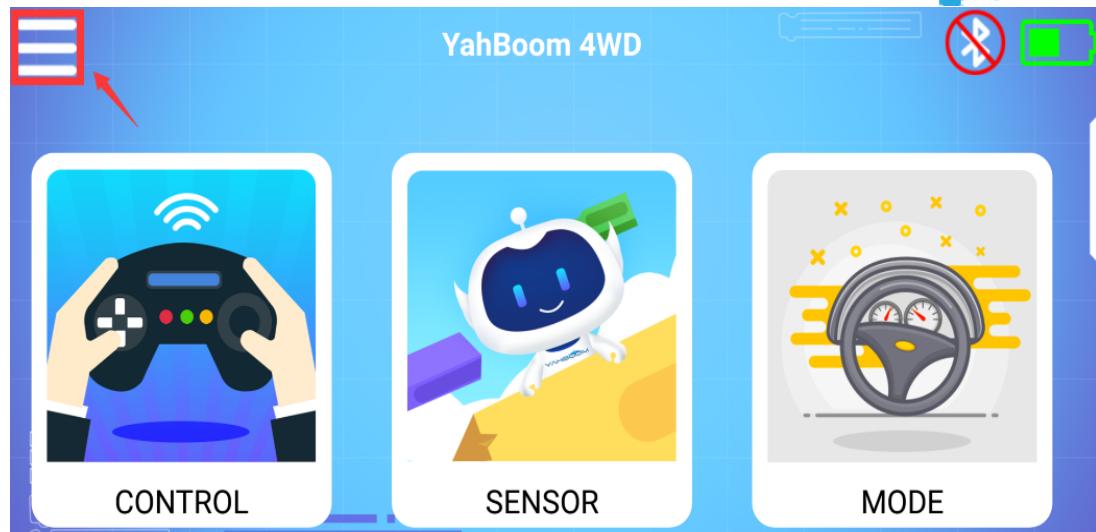
(2) The Bluetooth module needs to be properly inserted into the expansion board of the robot car. As shown in the figure below.



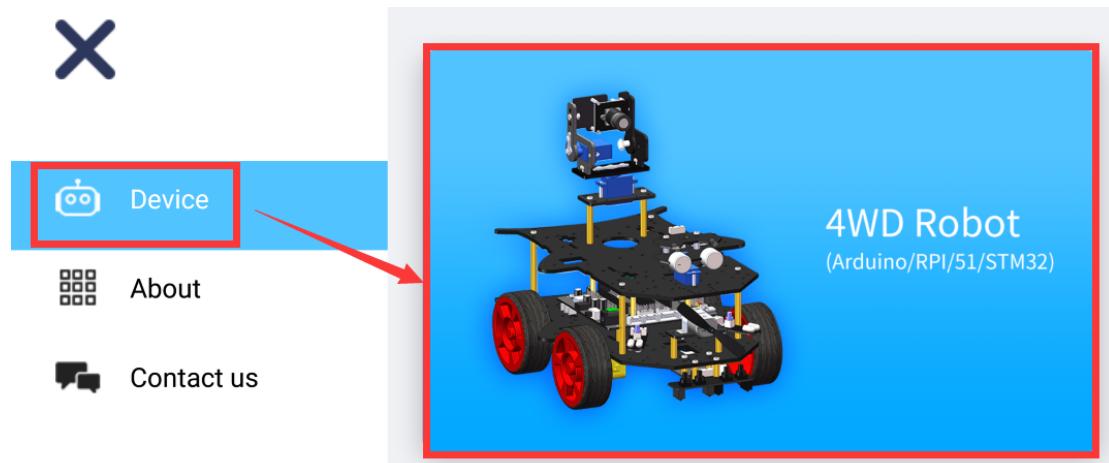
(3)Then, open the **YahboomRobot** APK. You will see the APK interface and



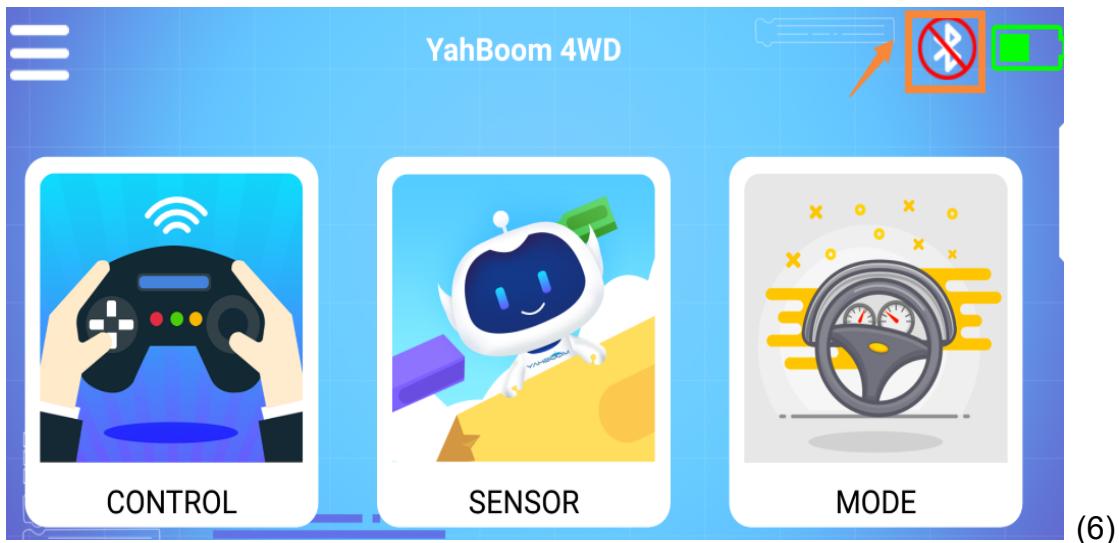
we need to click on the top left corner of the APK to select the device as shown below.



(4)Select 【4WD Robot】to enter the remote control interface, as shown below:

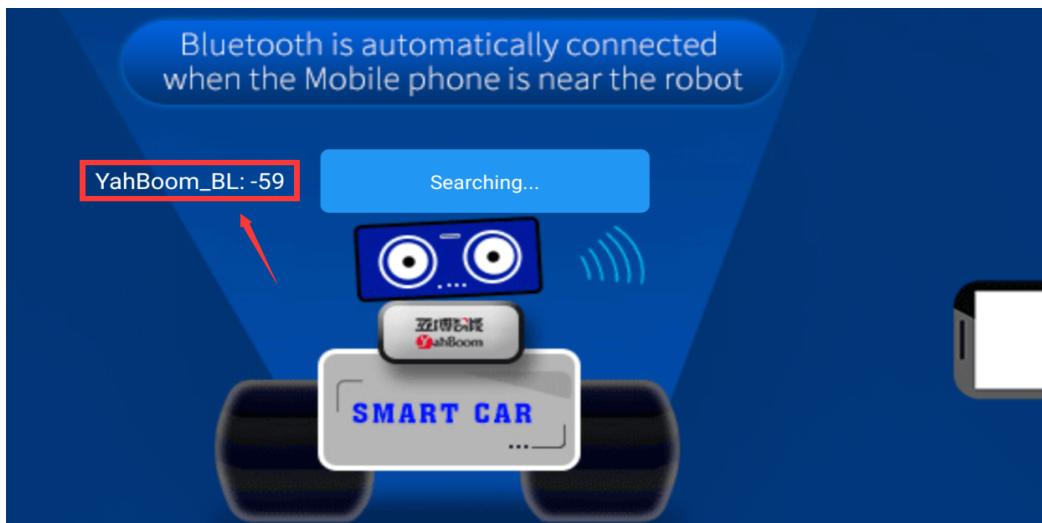


(5)You will this interface as shown below. Click on the top right corner of the APK to connect bluetooth.

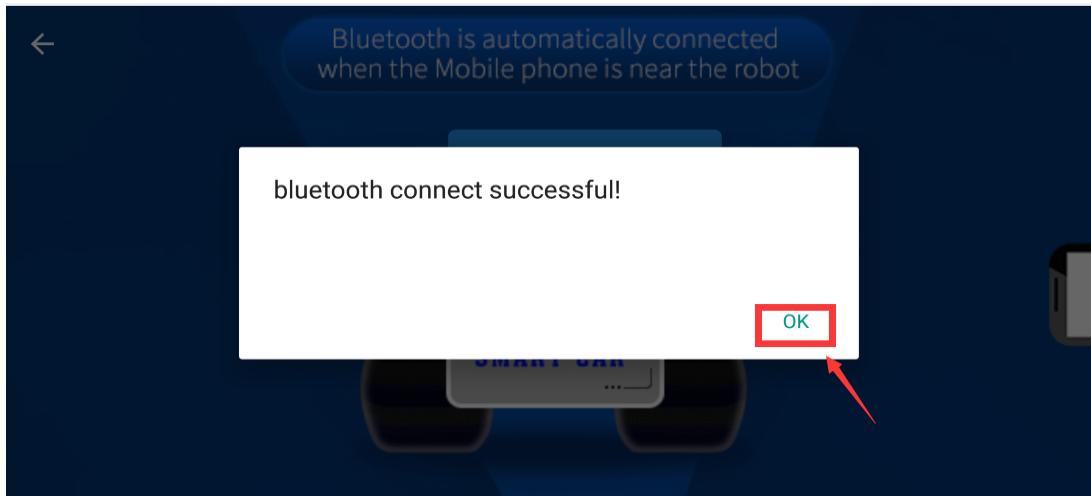


(6)

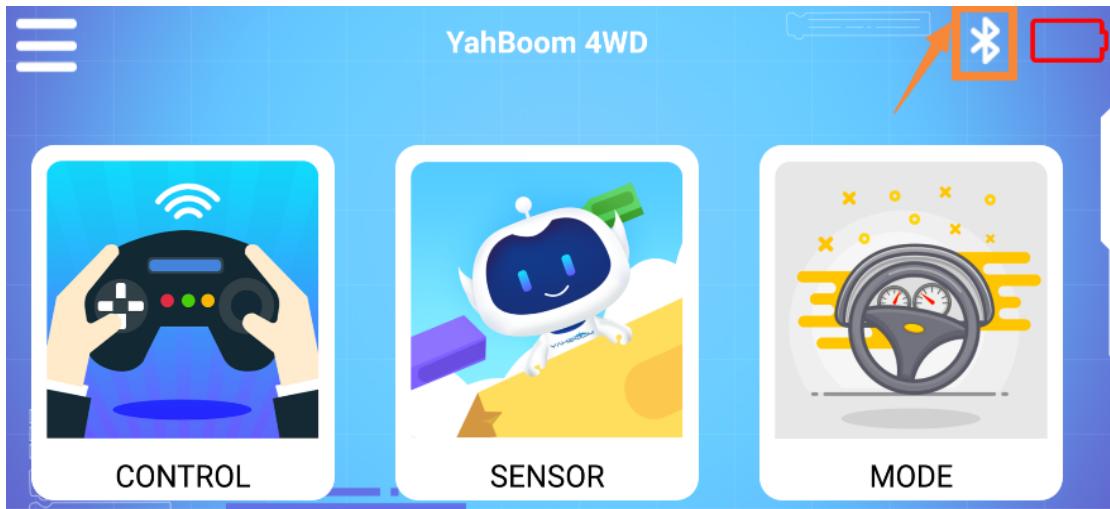
You can see Bluetooth signal. Wait patiently, the phone will automatically connect to the Bluetooth near the car.



(6) Bluetooth can be successfully connected, and the APP will enter the interface as shown below. At the same time, the red indicator of the Bluetooth module will be keep on. You need to click "OK".



You will enter the interface as shown below.



(7) Click “CONTROL” to enter interface as shown below. Wait for the ultrasonic data to change, it prove that Bluetooth starts to transmit data normally. You can start to control the car.

This product only supports 3 modes, remote control mode, camera tracking mode, and obstacle avoidance mode.

Remote mode: default is Bluetooth APP control, other modes can be selected by button.

Tracking mode: Please put the smart car on the black line first, click on the car to enter the tracking mode, click to close, the car will exit the tracking mode to enter the default remote mode.

Obstacle avoidance mode: Please put the smart car in the obstacle avoidance area first, click on the car to enter the ultrasonic obstacle avoidance mode, click to close, the car will exit the obstacle avoidance mode and enter the default remote control mode.