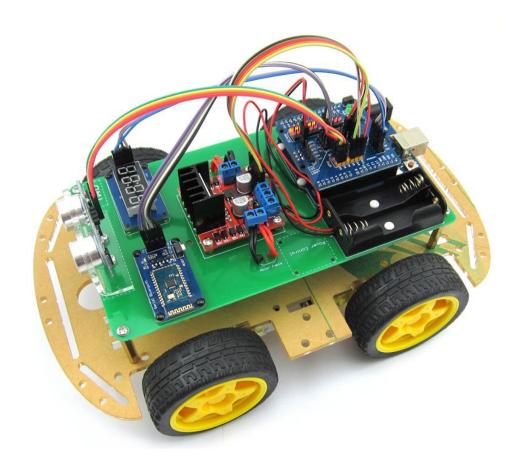
### Bluetooth 4WD Smart Car User Manual



NAME: <u>Bluetooth 4WD Smart Car User Manual</u>

VERSION: v1.0

**DATE:** Aug 15, 2015

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## O Please read me first!

- (1) According to <4WD Bluetooth Hardware Installation Tutorial.pdf> to install all the parts of the car.
- (2) If you do not get the Arduino IDE, please down it <a href="here">here</a>. And unzip the compressed package to your computer.
- (3) As the bluetooth control car system terminal is specially for android phone, so you should get one to test this car.
- (4) If you can not down load the files in our net disk and you have any problem with this car, please contact as: catalex inc@163.com.

## 1 Install the smart car library for Arduino

- (1) Download the compressed package file (Arduino code and Documentations.zip) from our <u>net disk</u>.
- (2) Unzip it to your PC and copy all the files in the director of ArduinoLib to the libraries directory of your Arduino IDE such as D:\arduino-1.6.5-r2\libraries.
- (3) Then close all the Arduino IDE windows and click arduino.exe to restart the Arduino IDE so that you have the smart car library installed.

# 2 Upload the demo code

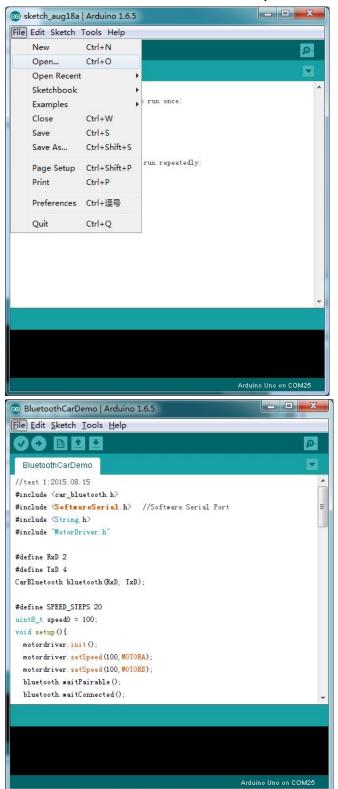
#### (1) Open the Arduino IDE

Click the arduino.exe to open the IDE below:

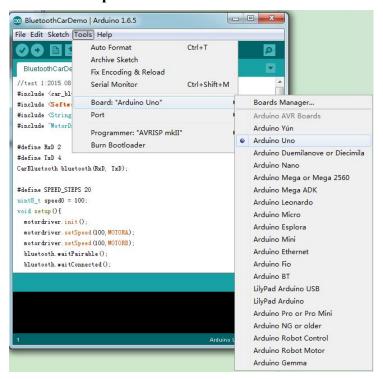
```
0
oo sketch_aug18a | Arduino 1.6.5
File Edit Sketch Tools Help
   sketch_aug18a
 void setup() {
  // put your setup code here, to run once:
 void loop () {
  // put your main code here, to run repeatedly:
}
                                                        Arduino Uno on COM25
```

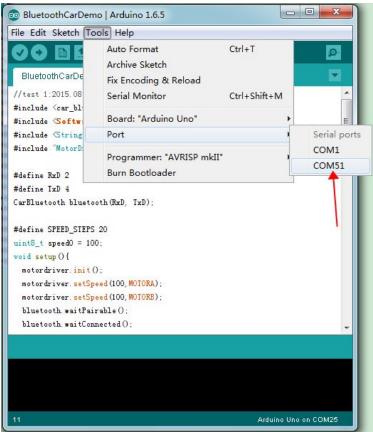
#### (2) Open the smart car demo code

Click File/Open to open BluetoothCarDemo.ino in the directory of \arduino-1.6.5-r2\libraries\CarBluetooth\examples\BluetoothCarDemo



# (3) And select Board: "Arduino Uno". Then select the serial port that your Arduino occupies.





#### (4) Click upload button to upload the example code.

```
- 0 X
∞ BluetoothCarDemo | Arduino 1.6.5
File Edit Sketch Tools Help
 ⊘ → B ± ±
 BluetoothCarDemo
//test 1:2015. Doad Button
#include <car_bluetooth.h>
#include (SoftwareSerial.h) //Software Serial Port
#include (String.h)
#include "MotorDriver.h"
#define RxD 2
#define TxD 4
CarBluetooth bluetooth (RxD, TxD);
#define SPEED_STEPS 20
uint8_t speed0 = 100;
void setup(){
 motordriver.init();
 motordriver.setSpeed(100,MOTORA);
 motordriver.setSpeed(100,MOTORB);
 bluetooth waitPairable();
 bluetooth waitConnected():
```

#### If uploading is done:

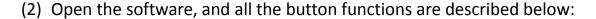
```
- - X
BluetoothCarDemo | Arduino 1.6.5
File Edit Sketch Tools Help
 90 6 9
 BluetoothCarDemo
//test 1:2015.08.15
#include <car_bluetooth.h>
 #include (SoftwareSerial.h) //Software Serial Port
 #include (String.h)
 #include "MotorDriver.h"
 #define RxD 2
 #define TxD 4
 CarBluetooth bluetooth(RxD, TxD);
 #define SPEED_STEPS 20
 uint8_t speed0 = 100;
  motordriver init():
 motordriver.setSpeed(100,MOTORA);
  motordriver.setSpeed(100,MOTORB);
  bluetooth waitPairable();
  bluetooth.waitConnected();
 Done uploading.
Global variables use 411 bytes (20%) of dynamic memory, leaving 1,637 bytes
for local variables. Maximum is 2,048 bytes.
```

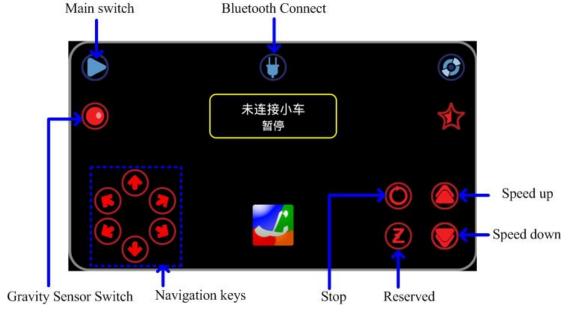
#### (5) Plug the batteries onto the socket

Plug the two 3.7V / 14500 Li-ion batteries that you buy at the local onto the black battery socket and unplug the USB cable. It is the power supply for the whole car.

## 3 Install software for Android phone

(1) Install the SmartCar.apk which is bluetooth control smart car software for android phone.





**Main switch**: When you want to use it to control your car, you should touch the Main Switch button first and then the frame changes color from gray to red.

Bluetooth Connect: Touch the Bluetooth Connect button to search your smart car.

**Gravity Sensor Switch**: When you want to control your smart car by the gravity sensing of your android phone, you can touch this button to start.

**Navigation keys**: When you do not turn on the the gravity sensing mode, you can use these buttons to control the traveling direction of the smart car.

**Stop**: When you do not turn on the the gravity sensing mode, you can use it to stop the car.

**Reserved:** Our libraries for Arduino does not support this function yet.

**Speed up**: When you do not turn on the the gravity sensing mode, it is valid.

**Speed down**: When you do not turn on the the gravity sensing mode, it is valid.

(3) Click the Main Switch button and then the frame changes color from gray to red.



(4) **Click the Bluetooth Connect button**. It will pop up the window prompted to turn on the Bluetooth if the phone's Bluetooth is not turned on.

And you should click the button on the left side of the window. Then it will search the smart car, and when it finds the car you should click the car name but not the other buttons. Wait some seconds and then the phone is connected to the car, and the red LED does not blink any more.

(5) You can click the navigation keys to control the car now. And you can also click the Gravity Sensor Switch to start gravity sensing. If you want to stop the car, you can click the Stop button only when the gravity sensing is off. Enjoy yourself!!