Lesson 17 Remote Control- Introduction to IR

17.1 Overview

In the last lesson we know how to use IR module to pass data with Adeept Robot Control Board. In this course we learn how to use infrared remote control to control the car.

17.2 Principle Introduction

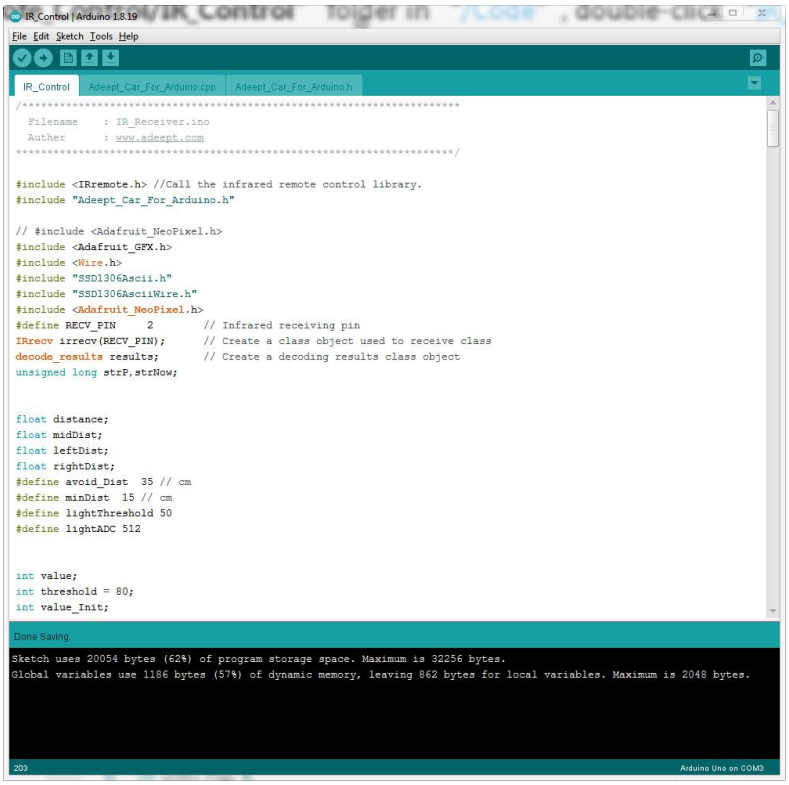
The corresponding relationship between the buttons of the infrared remote control and the functions of the car is as follows:

Button	Function	Button	Function
	Forward	5	Matrix screen lights up
	Backward	6	Drift Right
	Turn Left	7	Drift Rear-left
	Turn Right	8	Line Tracking Function
OK	Stop Function	9	Drift Rear-right
1	Drift Front-left	*	Avoid Obstacles Function
2	Alarm Light	0	Keep distance
3	Drift Front-right	#	Light Tracking Function
4	Drift Left		

17.3 Running Infrared Control

1. Connect your computer and Adeept Robot Control Board (Arduino Board) with a USB cable.

2. Open " **13_Remote_Control_Mecanum/IR_Control** " folder in " /Code " , double-click "IR_Control.ino" .

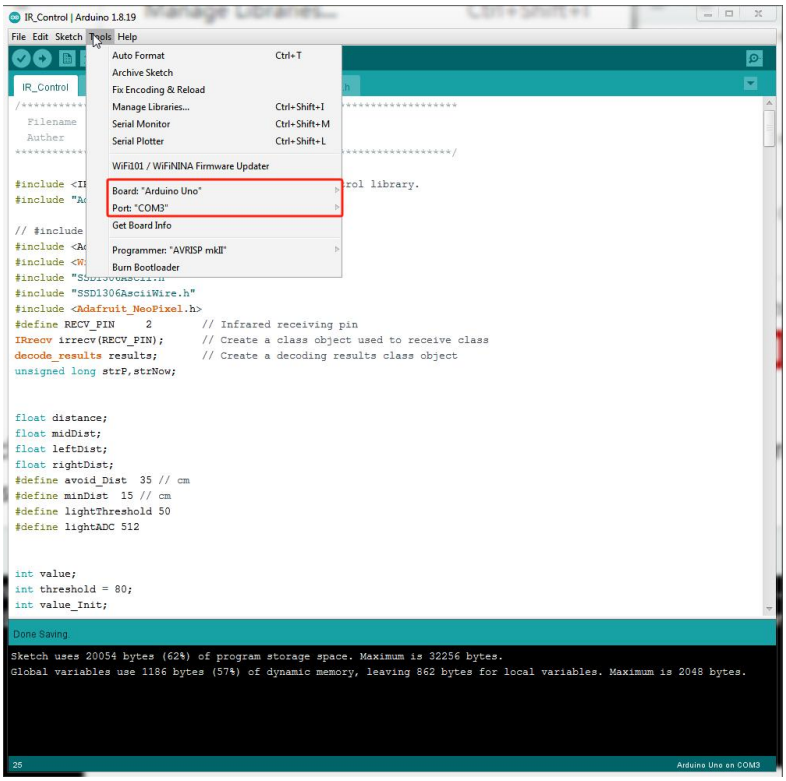


3. Select development board and serial port.

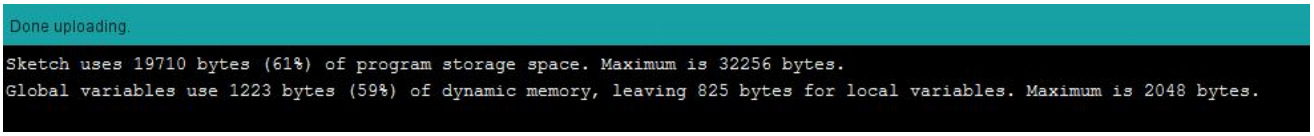
Board: Tools--->Board--->Arduino AVR Boards--->Arduino Uno

Port: Tools --->Port--->COMx

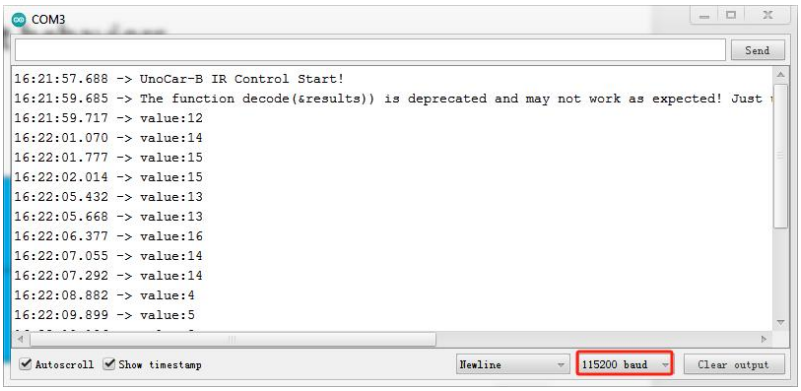
Note: The port number will be different in different computers.



4. After opening, click  to upload the code program to the Arduino. If there is no error warning in the console below, it means that the Upload is successful.



5. Click Serial Monitor, Set the baud rate as 115200.Then operate the car, and you can see the commands received by the car in this window.



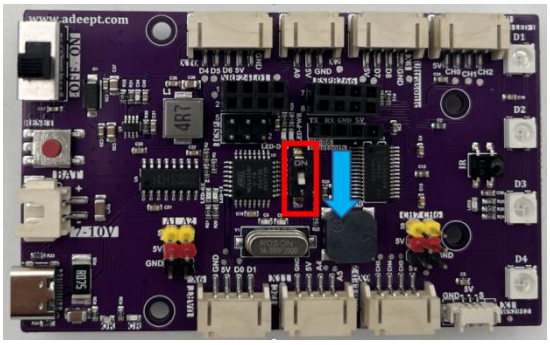
6. Use the IR remote to aim at the IR receiver on the expansion board. Press different buttons on the infrared remote control, you can see that the car has different behaviors.

Button	Function	Button	Function
↑	Forward	5	Matrix screen lights up
↓	Backward	6	Drift Right
←	Turn Left	7	Drift Rear-left
→	Turn Right	8	Line Tracking Function
OK	Stop Function	9	Drift Rear-right
1	Drift Front-left	*	Avoid Obstacles Function
2	Alarm Light	0	Keep distance
3	Drift Front-right	#	Light Tracking Function
4	Drift Left		

Please familiarize yourself with the button functions of the infrared remote control first. Please see the list above for the button functions.

It is recommended to raise the vehicle body during testing so that the wheels are suspended in the air.

Note: If the upload program fails, a red error message appears. Please confirm whether the RX/D0 switch is in the correct position. Toggle down the paddle (white) of the switch in the picture below.



After assembling the car, please use the 18650 battery to provide power when uploading the program, otherwise the program may not be uploaded successfully due to excessive load.

Q&A

If the rotation direction of the wheels is opposite to the actual operation, please perform the following steps:

Go to the '**Code\13_Remote_Control_Mecanum\IR_Control**' folder, open the '**IR_Control.ino**' file, and modify the parameter '**dir=-1**'.