

arduino-Serial port method

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- Experimental preparation
- Experimental purpose
- Experimental wiring
- Experimental steps and phenomena
- Experimental source code

Experimental preparation

1. Arduino mainboard
2. 8-channel line patrol module
3. Several Dupont cables

The Arduino board needs to download the serial communication source code provided in the document

Experimental purpose

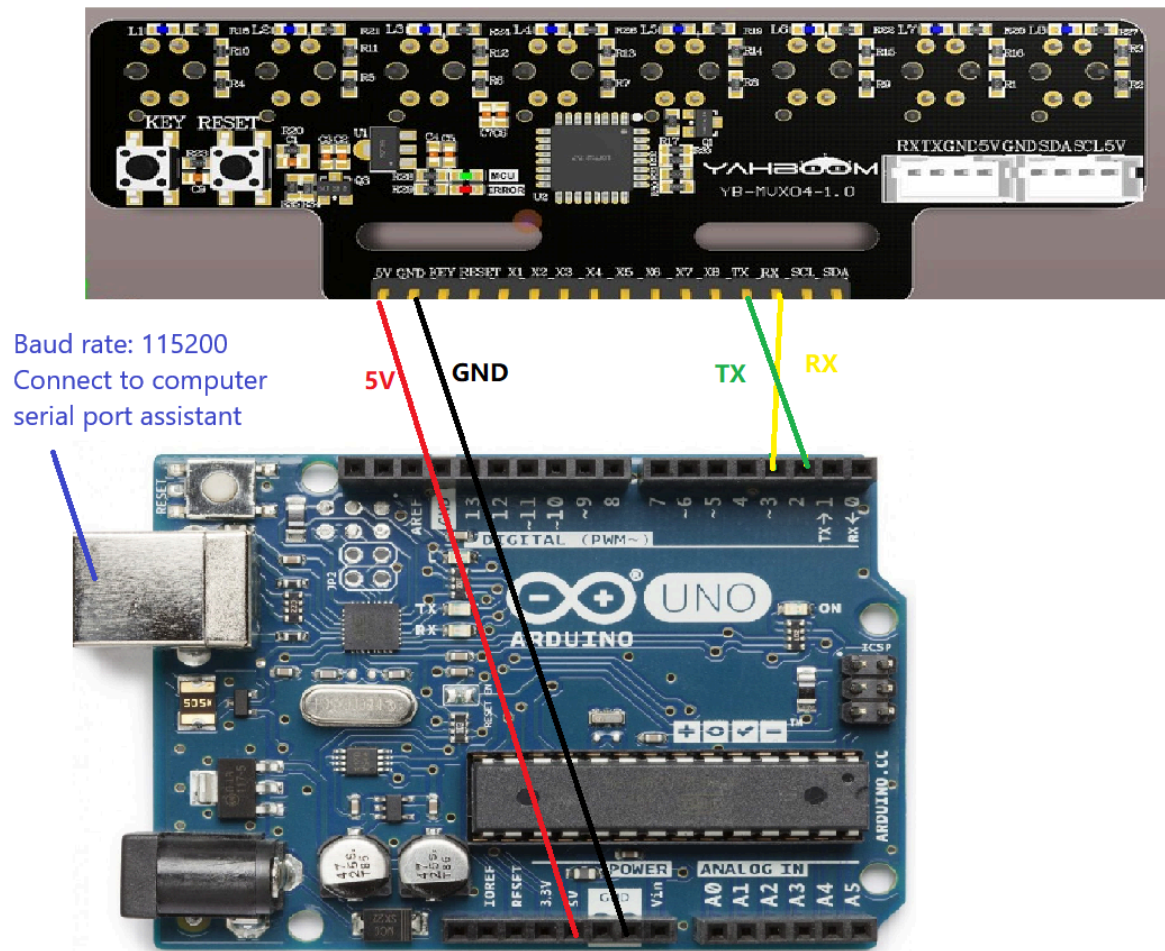
The content of this experiment is mainly to use the Arduino master to receive the data of the 8-way line patrol module through the serial port.

Experimental wiring

Aduino connected to the serial port assistant can be directly connected using the program download port

adruino	8-channel line patrol module
2	TX
3	RX
5V	5V
GND	GND

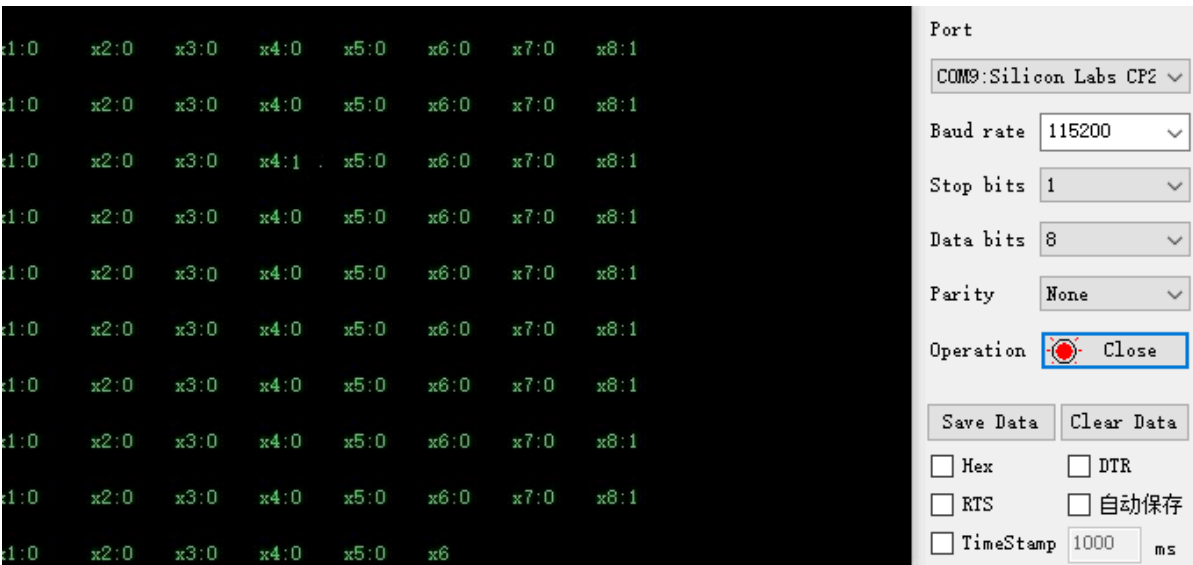
As shown in the figure:



Experimental steps and phenomena

1. After connecting the wires, open the serial port assistant and you can see the numerical data of the infrared module. Set the baud rate to 115200.

As shown below:



Experimental source code

```

extern uint8_t g_new_package_flag ;
void setup()
{
    serial_init();//Serial port initialization
    //Waiting for the module to be normal
    SET_Eight_Mode(0,0,1);//Set to receive only numeric data

}

void loop()
{
    //Mainly handle serial port interrupt
    recv_data(); //take over
    if(g_new_package_flag ==1)
    {
        g_new_package_flag = 0;
        Deal_Usart_Data();//Data analysis numerical type
    }
}

```

SET_Eight_Mode(0,0,1);: The first parameter of this function is the calibration mode (0: exit calibration mode 1: enter calibration mode) The second parameter is whether to receive analog data The third parameter is whether to receive numerical data.

This routine only provides parsing of numerical data. If you need to parse analog data, you can parse it yourself according to the protocol. The serial port parsing file of this project also has a function for parsing analog values. You can refer to it and call the **Deal_Usart_AData** function.