

树莓派第十八课 红外接收解码

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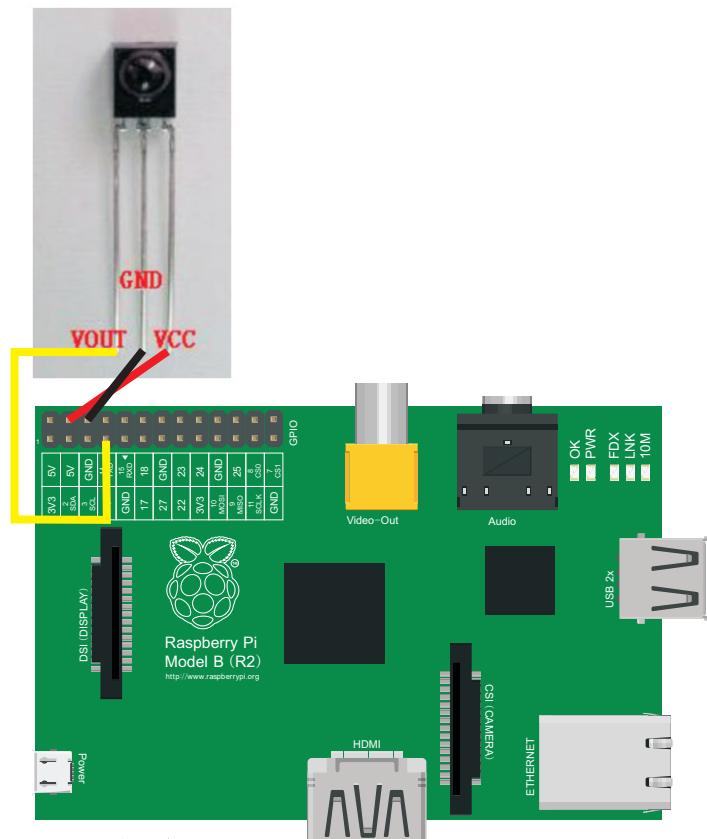
pi@raspberrypi: ~/树莓派基础套件程序资料/第十八课\ \ \ 红外遥控\ 红外接收解码/
pi@raspberrypi: ~/树莓派基础套件程序资料/第十八课\ \ \ 红外遥控\ 红外接收解码 $ ls
hongwai.c
pi@raspberrypi: ~/树莓派基础套件程序资料/第十八课\ \ \ 红外遥控\ 红外接收解码 $ nano hongwai.c
pi@raspberrypi: ~/树莓派基础套件程序资料/第十八课\ \ \ 红外遥控\ 红外接收解码 $ gpio readall
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| BCM | wPi |   Name   | Mode | V | Physical | V | Mode |   Name   | wPi | BCM |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
|      |      | 3.3v     |      |   | 1 || 2 |      | 5v       |      |      | |
| 2  | 8  | SDA.1    | ALT0 | 1 | 3 || 4 |      | 5V       |      |      |
| 3  | 9  | SCL.1    | ALT0 | 1 | 5 || 6 |      | 0v       |      |      |
| 4  | 7  | GPIO. 7  | IN   | 0 | 7 || 8 | 1 | ALT0 | TxD      | 15  | 14  |
|      |      | 0v       |      |   | 9 || 10 | 1 | ALT0 | RxD      | 16  | 15  |
| 17 | 0  | GPIO. 0  | IN   | 0 | 11 || 12 | 0 | IN   | GPIO. 1  | 1   | 18  |
| 27 | 2  | GPIO. 2  | IN   | 0 | 13 || 14 |   |      | 0v       |      |      |
| 22 | 3  | GPIO. 3  | IN   | 0 | 15 || 16 | 0 | IN   | GPIO. 4  | 4   | 23  |
|      |      | 3.3v     |      |   | 17 || 18 | 0 | IN   | GPIO. 5  | 5   | 24  |
| 10 | 12 | MOSI     | ALT0 | 0 | 19 || 20 |   |      | 0v       |      |      |
| 9  | 13 | MISO     | ALT0 | 0 | 21 || 22 | 0 | IN   | GPIO. 6  | 6   | 25  |
| 11 | 14 | SCLK     | ALT0 | 0 | 23 || 24 | 1 | ALT0 | CE0      | 10  | 8   |
|      |      | 0v       |      |   | 25 || 26 | 1 | ALT0 | CE1      | 11  | 7   |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| 28 | 17 | GPIO.17  | IN   | 0 | 51 || 52 | 0 | IN   | GPIO.18  | 18  | 29  |
| 30 | 19 | GPIO.19  | IN   | 0 | 53 || 54 | 0 | IN   | GPIO.20  | 20  | 31  |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| BCM | wPi |   Name   | Mode | V | Physical | V | Mode |   Name   | wPi | BCM |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
pi@raspberrypi: ~/树莓派基础套件程序资料/第十八课\ \ \ 红外遥控\ 红外接收解码 $ gcc hongwai.c -o hongwai -lwiringPi
pi@raspberrypi: ~/树莓派基础套件程序资料/第十八课\ \ \ 红外遥控\ 红外接收解码 $ ls
hongwai hongwai.c
pi@raspberrypi: ~/树莓派基础套件程序资料/第十八课\ \ \ 红外遥控\ 红外接收解码 $ sudo ./hongwai
^Cpi@raspberrypi: ~/树莓派基础套件程序资料/第十八课\ \ \ 红外遥控\ 红外接收解码 $

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图一

```
pi@raspberrypi: ~/... File: hongwai.c
GNU nano 2.2.6
#include "wiringPi.h"
#include <stdlib.h>
#include <stdio.h>
#include <unistd.h>
#include <stdint.h>
#include <string.h>
#define IR_PIN 7
#define SETBIT(X,Y) ((X) |=(1<<(Y)))
#define CLRBIT(X,Y) ((X) &=~(1<<(Y)))
#define REVBIT(X,Y) ((X) ^=(1<<(Y)))
void main()
{
wiringPiSetup();
pinMode(IR_PIN, INPUT);
pullUpDnControl(IR_PIN, PUD_OFF);
uint32_t i;
uint32_t header1;
uint32_t header2;
uint32_t data[65];
while(1)
{
restart:
while(!digitalRead(IR_PIN))
{
header1=0;
while(!digitalRead(IR_PIN) && header1<65535)
header1++;
if(header1>=65535) goto restart;
header2=0;
while(digitalRead(IR_PIN) && header2<65535)
header2++;
if(header2>=65535) goto restart;
for(i=64;i>0;i--)
[ Read 101 lines ]
^G Get Help      ^O WriteOut      ^R Read File     ^Y Prev Page     ^K Cut Text      ^C Cur Pos
^X Exit          ^J Justify        ^W Where Is     ^V Next Page     ^U UnCut Text    ^T To Spell
```

图二



图三