

Wireless Remote Using 2.4 Ghz NRF24L01 : Simple Tutorial Using of NRF24L01 & Arduino

Akshay Jha (/member/Akshay+Jha/) in wireless (/tag/type-id/category-technology/channel-wireless/)

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5 Steps

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Hello Everyone this is my second instructable . After lots of surfing on GOOGLE when I wont able to find a easy and a simple tutorial for NRF24L01 transceiver then I decided to publish an instructable on this. This is a simple short and easy tutorial for NRF24L01 Radio 2.4GHz Transmitter Receiver. In this tutorial I am going to control led using a pair of NRF24L01 transceiver.

Step 1: Small Introduction About NRF 24L01 transceiver

Wireless Remote Using 2.4 Ghz NRF24L01 : Simple Tutorial Usi...



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Akshay Jha (/member/Akshay+Jha/)

Just4electronics (https://just4electronics.wordpress.com/)

62

Bio: Hello I am Tech Creator Akshay I love electronics and get in touch for more projects

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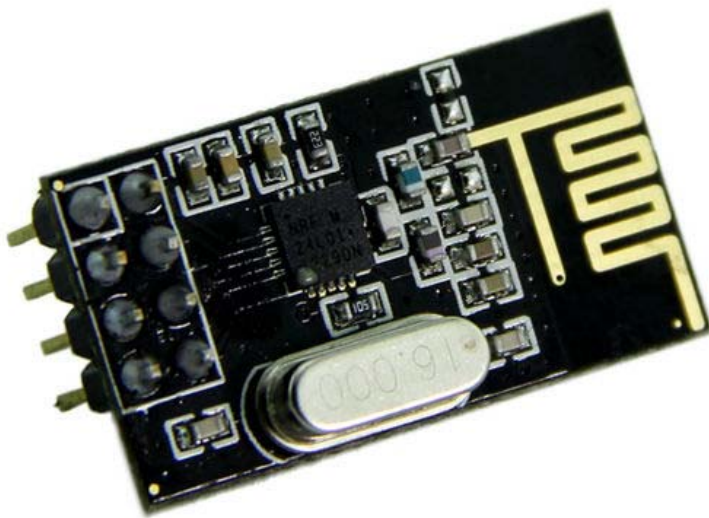
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The nRF24L01 is a highly integrated, ultra low power (ULP) 2Mbps RF transceiver IC for the 2.4GHz ISM (Industrial, Scientific and Medical) band. With peak RX/TX currents lower than 14mA, a sub μ A power down mode, advanced power management, and a 1.9 to 3.6V supply range, the nRF24L01 provides a true ULP solution enabling months to years of battery lifetime when running on coin cells or AA/AAA batteries .

Step 2: Material Require



[[FILE/EUTVALU2IDVME ID6A]]

[[FILE/EK/TPV7IDVMEI AP4]]

[[FILE/FA700VEIDVMEI AK4]]

[[FILE/EW/ITOVVIDVMEKEVA]]

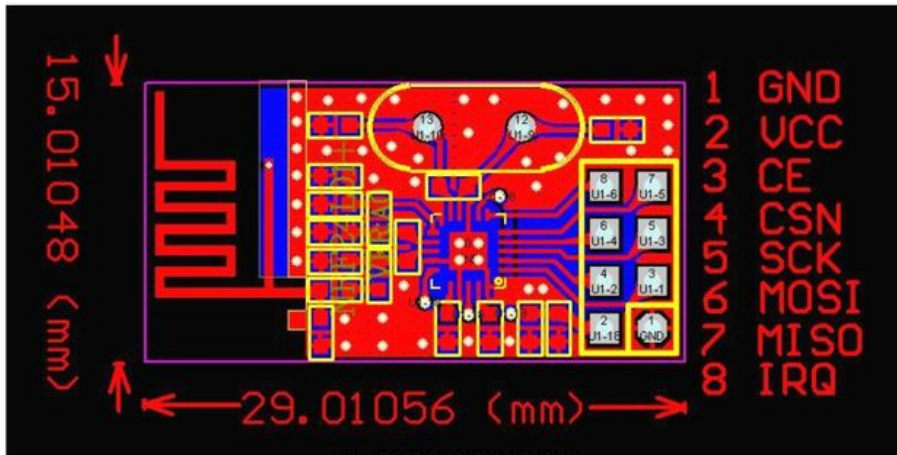
[[FILE/EU/MD07IDVMEK04]]

Show All Items

1. 2 PCS NRF24L01+2.4 GHz Wireless Transceiver module
2. 2 Arduino any (I have used one arduino R3 & nano)
3. Male to. femal jumpers
4. LED
5. Any Switch

6. 10K resistor

Step 3: Connections



- Connect the following pins to your Arduino: as shown in figure
- **Pin 9 - CE**
- **Pin 10 - CS(N)**
- **Pin 11 - MOSI**
- **Pin 12 - MISO**
- **Pin 13 - SCK**
- **3.3v - VCC**
- **GND - GND**
- **On the Receiver Pin 3 - LED**
- **On the Transmitter Pin 7 - Button**
- same connection for receiver and transmitter and you can use any arduino board

Step 4: Coding arduino

For coding arduino first we need some library files so follow the steps given below :

1. Download the ZIP file (library file zip folder from attachments).
3. Unpack the ZIP file.
4. Go to arduino library folder
5. And paste both the folders named " nFR24L01" and "RF24" into it.

Now, program the Arduino receiver and transmitter

Code for Receiver

```
<p>#include <SPI.h><br>#include "nRF24L01.h"
#include "RF24.h"
int msg[1];
RF24 radio(9,10);
const uint64_t pipe = 0xE8E8F0F0E1LL;
int LED1 = 3;</p><p>void setup(void){
  Serial.begin(9600);
  radio.begin();
  radio.openReadingPipe(1,pipe);
  radio.startListening();
  pinMode(LED1, OUTPUT);}</p><p>void loop(void){
  if (radio.available()){
    bool done = false;
    while (!done){
      done = radio.read(msg, 1);
      Serial.println(msg[0]);
      if (msg[0] == 111){delay(10);digitalWrite(LED1, HIGH);}
      else {digitalWrite(LED1, LOW);}
      delay(10);}}
  else{Serial.println("No radio available");}}</p>
```

Code for Transmitter

```
<p>#include <SPI.h><br>#include "nRF24L01.h"
#include "RF24.h"
int msg[1];
RF24 radio(9,10);
const uint64_t pipe = 0xE8E8F0F0E1LL;
int SW1 = 7;</p><p>void setup(void){
  Serial.begin(9600);
  radio.begin();
  radio.openWritingPipe(pipe);}</p><p>void loop(void){
  if (digitalRead(SW1) == HIGH){
    msg[0] = 111;
    radio.write(msg, 1);}}</p>
```



library files.zip (/ORIG/FV6/0AAE/IBXM5ZiY/FV60AAEIBXM5ZiY.zip)

Step 5: Testing

Wireless Remote Using 2.4 Ghz NRF24L01 : Simple Tutorial Usi...



This is a last step after completing the circuit and coding part we can easily test it by switching "ON" and "OFF". .

When switch is "ON" on transmitter side connected to pin 7 of arduino then led glows on receivers side connected to pin 3 of arduino .Video Shows the output of this project.

THANKS HOPE THIS WILL HELP YOU





We have a be nice comment policy. Please be positive and constructive.

 I Made it!

 Add Images

Post Comment



stevenleeyongwah (/member/stevenleeyongwah)

8 days ago

Reply

Thank you so much! Finally got it working with arduino uno as transmitter and arduino mega as receiver. Just make sure u connect the NRF24L01 to arduino mega with correct pin.



Akshay Jha (/member/Akshay Jha) (author) ▶ stevenleeyongwah

(/member/stevenleeyongwah)

2 days ago

Reply

You are welcome. Comments like these always motivates me and in coming days I am going to write much better instructable on nrf24l01 to make it more easier to work on it and also with more advance uses



vermasachin (/member/vermasachin)

20 days ago

Reply

finally, able to run the code successfully now.

made few changes to the rcvr code to fix the radio.read error and also in my case the led was not turning off after I release the button, so I added line to turn it off

```
#include <SPI.h>

#include "nRF24L01.h"
#include "RF24.h"

int msg[1];

RF24 radio(9,10);

const uint64_t pipe = 0xE8E8F0F0E1LL;

int LED1 = 3;

void setup(void){
  Serial.begin(9600);
  radio.begin();
  radio.openReadingPipe(1,pipe);
  radio.startListening();
  pinMode(LED1, OUTPUT);}

void loop(void){
  if (radio.available()){
    bool done = false;
    while (radio.available()){
      radio.read(msg, 1);
```

```
Serial.println(msg[0]);  
if (msg[0] == 111){delay(10);digitalWrite(LED1, HIGH);}  
else {digitalWrite(LED1, LOW);}  
delay(10);  
msg[0] == 9;}}  
else; {Serial.println("No radio available");  
digitalWrite(LED1, LOW);}  
}
```



Carlos JA (/member/Carlos JA) made it!

a month ago

[Reply](#)

Heelp!!



(<https://cdn.instructables.com/FR9/RUY5/IWQPPSRJ/FR9RUY5IWQPPSRJ.LARGE.jpg>)



vermasachin (/member/vermasachin) ▶ Carlos JA (/member/Carlos JA)

[Reply](#)

were you able to resolve this???, I am getting the same error too !!!

25 days ago



BharathRam (/member/BharathRam) ▶ vermasachin (/member/vermasachin)

21 days ago

[Reply](#)

replace it by `radio.read(msg, 1);`
it means you are trying to get value from void function



abdualmlk_sb (/member/abdualmlk_sb)

2 months ago

[Reply](#)

thanks man that was very helpful to me



Akshay Jha (/member/Akshay Jha) (author) ▶ abdualmlk_sb

(/member/abdualmlk_sb)

2 months ago

[Reply](#)

welcome bro :-)



shaun.husain (/member/shaun.husain)

2 months ago

[Reply](#)

Nice job I also am using these modules for a controller with a model here <http://www.thingiverse.com/thing:1864536> I made a preliminary PCB for hooking up between the nrf module and arduino nano but am thinking I will modify it to just have the atmega 328p chip right on my PCB instead of stacking the modules.



vermasachin (/member/vermasachin)

2 months ago

[Reply](#)

Hello Akshay - thanks for sharing this. unfortunately I am not able to make it work on my circuit. Dont know if it something I am doing wrong or if my circuit board are bad. Can you suggest any trouble shooting tips to see what is wrong with my circuit?

Also curious to know what does the syntax `</p>` `<p>` means and what is its significance....I am very new to Arduino so pardon me asking very basic question



shaun.husain (/member/shaun.husain) ▶ vermasachin (/member/vermasachin)

2 months ago

Reply

For troubleshooting use a voltmeter and check that wires are connected where you expect, also check the voltage on the 3.3V is going to the wireless module without a problem. Also can be useful to use `Serial.begin(9600);` in your setup and `Seral.println("signs of life");` `Serial.println(someImportantVar);` in your loop function to see that things are working on the arduino side. The `<p>` is HTML syntax and is accidental (probably copy paste problem or issue with instructable formatting, would check the zip for code).

Beyond the voltmeter I just bought and assembled a really cheap oscilloscope (\$20-30) and even with this cheapo oscilloscope I can see some digital signals on various pins communicating to the rf module.

Also read up here for more details <https://arduino-info.wikispaces.com/Nrf24L01-2.4GH...> (<https://arduino-info.wikispaces.com/Nrf24L01-2.4GHz-HowTo>)

In particular be sure to include a capacitor across the 3.3V and ground (with negative side towards ground), 100uF with any Voltage above 3.3V will be fine. The rf module will otherwise draw too much power occasionally causing it to "brown out".



AkashdeepC (/member/AkashdeepC)

2 months ago

Reply

awesome man nicely done.....good jog..



Akshay Jha (/member/Akshay Jha) (author) ▶ AkashdeepC

(/member/AkashdeepC)

2 months ago

Reply

Thanks bro :-)



Akshay Jha (/member/Akshay Jha) (author) ▶ AkashdeepC

(/member/AkashdeepC)

2 months ago

Reply

Thanks :-)



allana alain (/member/allana alain)

4 months ago

Reply

Hi. Can someone please help me how to combine the receiver codes with a lcd library? its for our project. please. thanks.



kartik-agrawal_97 (/member/kartik-agrawal_97)

4 months ago

Reply

i couldn,t make it yrr led glows when the transmitter swith is on but it has no relation with the switch acutally led glow when the transmitter is on althow swith is off and led is off when transmitter is off please help me in this



youcanmakeit (/member/youcanmakeit)

5 months ago

Reply

Hello when I am trying this I only get "255" in the serial monitor of the receiver before and after truing on the transmitter.



ChiaraL2 (/member/ChiaraL2)

5 months ago

Reply

Even if I follow each step exactly, I get "No Radio Available"... I'm using an Arduino Uno as transmitter e an Arduino Mega as Receiver in order to switch on and off a led by a switch button. I've controlled again and again connections and it seems to be everything right. Which could be the problem?



Akshay Jha (/member/Akshay Jha) (author) ▶ ChiaraL2 (/member/ChiaraL2)

5 months ago

Reply

Can you use any other board like arduino mini instead of using arduino mega this might be a problem and please double check the connections



Raitis (/member/Raitis)

6 months ago

Reply

Thank you, this helped me understand the syntax of the code for nRF!



jimkan (/member/jimkan)

a year ago

Reply

Jha,

Got an error on this line

```
done = radio.read(msg, 1);
```

couldn't figure out this compiler error "void value not ignored as it ought to be"

Thx



Akshay Jha (/member/Akshay Jha) (author) ▶ jimkan (/member/jimkan)

Reply

a year ago

@ jimkhan Sorry for late reply I think you should try with new version of arduino ide .



JT3WH0 (/member/JT3WH0) ▶ Akshay Jha (/member/Akshay Jha)

Reply

9 months ago

I get the same error, installed latest arduino, still the same error



JT3WH0 (/member/JT3WH0) ▶ JT3WH0 (/member/JT3WH0) 9 months ago

Reply

Fixed, I deleted the rf24 library I had an installed the one linked from arduino, then it compiled



BryanT46 (/member/BryanT46) ▶ JT3WH0 (/member/JT3WH0)

Reply

9 months ago

Just to let you know, the newer library function "radio.read" is now a void, and not a boolean function. View the function here: <https://github.com/TMRh20/RF24/blob/master/RF24.h#L201>



DARTHswagger (/member/DARTHswagger) ▶ BryanT46 (/member/BryanT46)

6 months ago

Reply

I know this is a bit late to the original question, but I just stumbled across this and in case people are still wondering (like I was). Here's a bit to save you the headache.

As BryanT46 (<http://www.instructables.com/member/BryanT46>) mentioned, the radio.read is a void not a boolean. This means you need to change the "done = radio.read(msg, 1);" to "radio.read(msg,1);" and completely get rid of the while loop (keep everything inside it though). The "bool done = false" can be deleted as well.

Replace:

```
delay(10);  
  
digitalWrite(LED1, HIGH);  
  
with:  
  
digitalWrite(LED1, HIGH);  
  
delay(10);  
  
digitalWrite(LED1, LOW);
```

I had to change it to that way because after receiving the "111" and releasing the button, the program quickly reverts to "no radio available". So i have it just turn it on and off and then it's constantly checking for the new input. So if you hold it down it'll stay lit. The turn off could also easily be in the radio availability else section.

Finally, change the "if (radio.available())" to "if (radio.available() == true)". It was giving me funky feedback when the if wasn't defined correctly.

-DarthSwagger



mbehera1 (/member/mbehera1)

8 months ago

[Reply](#)

getting error on receiver part.....

****void value not ignored as it ought to be****



(<https://cdn.instructables.com/FQL/DJOU/IOQ1IKH4/FQLDJOUIOQ1IKH4.LARGE.jpg>)



procesor (/member/procesor) ▶ [mbehera1 \(/member/mbehera1\)](#)

[Reply](#)

8 months ago

Did you fix that ? If you do, tell me how because i have the same problem.



DarthSwagger (/member/DarthSwagger) ▶ [procesor \(/member/procesor\)](#)

[Reply](#)

6 months ago

I know this is a bit late to the original question, but I just stumbled across this and in case people are still wondering (like I was). Here's a bit to save you the headache.

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Replace:

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with:  
  
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delay(10);  
  
digitalWrite(LED1, LOW);
```

I had to change it to that way because after receiving the "111" and releasing the button, the program quickly reverts to "no radio available". So i have it just turn it on and off and then it's constantly checking for the new input. So if you hold it down it'll stay lit. The turn off could also easily be in the radio availability else section.

Finally, change the "if (radio.available())" to "if (radio.available() == true)".
It was giving me funky feedback when the if wasn't defined correctly.

-DarthSwagger



joe1111 (/member/joe1111)

6 months ago

[Reply](#)

I am trying to use one transmitter to cycle through communications with receiver arduinos. I am trying to open pipe1 to receiver1, transmit data, receive a value from the receiver, and close that pipe. Open pipe2, transmit, receive, close pipe two. repeat through all receivers. I'm not sure how I set the transmitter to change writing pipes or how to use ACK to automatically check for the returned value rather than switching between transmitting and receiving. Appreciate any help.



JohnL451 (/member/JohnL451)

6 months ago

[Reply](#)

Cannot verify either tx or rx sketch: get error message *stray "#" in program*.



Ali Burak Ö (/member/Ali Burak Ö)

6 months ago

[Reply](#)

made it.
thanks



AchieverSanjay (/member/AchieverSanjay)

7 months ago

[Reply](#)

Dear Akshay,

Kindly provide a code to control 4 outputs (non-toggle) using nRF24L01 module.

Thanks in Advance.



bhadresh parmar (/member/bhadresh parmar)

8 months ago

[Reply](#)

Thanks mr.jha.I made it and is working.tried adding more switches and led.does not work.pls guide to get the result.
Regards



cts_casemod (/member/cts_casemod)

a year ago

[Reply](#)

Ok, so using the code below, the only thing I managed to get was 'no radio available' error. After scratching my head, I decided to have a look at the libraries and change a few things to get this in a working state.

I tried both arduino 1.05 and 1.6.7.

First I changed the master to enable the internal pull up. What this does is keeps the input pin in a high level unless one grounds it, making the assembly of a switch easier.

Second, I added a bit called senderId. This is a 8 bit binary word which is sent from the transmitter to the receivers. On its most basic form, it can be used to control 256 receivers, by checking the received message.

Lastly I changed the transmission speed to 250Khz. I dont see the need for more and transmission quality/range is increased.

Hardware wise I attached a 2.2uF ceramic capacitor directly to the pins on the receiver (1206 SMT). This was needed to achieve reliable transmission.

So the code:

Transmitter:

```

#include <SPI.h>
#include "nRF24L01.h"
#include "RF24.h"

int transmitterId = 0;

// Set up nRF24L01 radio on SPI bus plus pins 9 & 10
// Contacts from the radio to connect NRF24L01 -> Arduino

//SCK -> 13
//MISO -> 12
//MOSI -> 11
//CSN -> 10
//CE -> 9

RF24 radio(9, 10);

// Transmitter address
const uint64_t pipe = 0xE8E8F0F0E1LL;

//button connected to these pins

int buttonPin1 = 7;

void setup(void) {

// CHANGE THIS PER EACH TRANSMITTER, from 0 to 255
transmitterId = 64;

pinMode(buttonPin1, INPUT_PULLUP);
radio.begin();

// the following statements improve transmission range
radio.setPayloadSize(2); // setting the payload size to the needed value
radio.setDataRate(RF24_250KBPS); // reducing bandwidth

radio.openWritingPipe(pipe); // set the transmitter address

}

void loop(void) {

//until button 1 (buttonPin1) pressed send the package (id) to receiver Arduino
if (digitalRead(buttonPin1) == HIGH) {

// some implementations automatically shut down the radio after a transmission:
this ensures the radio is powered up before sending data
radio.powerUp();

// read and write expect a reference to the payload (& symbol)
// second argument is the packet length in bytes (sizeof(int) == 2)
radio.write(&transmitterId, 1);
//delay(100);
}
}

*****

Receiver:

*****

#include <SPI.h>
#include "nRF24L01.h"
#include "RF24.h"

int senderId;

// Set up nRF24L01 radio on SPI bus plus pins 9 & 10

```

```
//Contacts from the radio to connect NRF24L01 pinamnam -> Arduino
```

```
//SCK -> 13
//MISO -> 12
//MOSI -> 11
//CSN -> 10
//CE -> 9
```

```
RF24 radio(9, 10);
```

```
// this is not the channel address, but the transmitter address
```

```
const uint64_t pipe = 0xE8E8F0F0E1LL;
```

```
// Output LED
int LEDpin = 3;
```

```
void setup(void) {
  Serial.begin(9600);
```

```
  radio.begin();
```

```
  // the following statements improve transmission range
```

```
  radio.setPayloadSize(2); // setting the payload size to the needed value
```

```
  radio.setDataRate(RF24_250KBPS); // reducing bandwidth
```

```
  radio.openReadingPipe(1, pipe); // Open one of the 6 pipes for reception
```

```
  radio.startListening(); // begin to listen
```

```
  // Enable all the LED pins as output
```

```
  pinMode(LEDpin, OUTPUT);
```

```
  digitalWrite(LEDpin, LOW); // this is unnecessary but good practice nonetheless
```

```
}
```

```
void loop(void) {
```

```
  // Turns off all the LEDs
```

```
  digitalWrite(LEDpin, LOW);
```

```
  if (radio.available()) {
```

```
    // this while is here to throw away all the packets but the last one
```

```
    bool done = false;
```

```
    while (!done) {
```

```
      // read and write expect a reference to the payload (& symbol)
```

```
      // second argument is the packet length in bytes (sizeof(int) == 2)
```

```
      done = radio.read(&senderId, 1);
```

```
    }
```

```
    //Light up the correct LED for 50ms
```

```
    if (senderId == 64)
```

```
    {
```

```
      digitalWrite(LEDpin, HIGH);
```

```
      Serial.print("LED ");
```

```
      Serial.print(senderId);
```

```
      Serial.print(" On , ");
```

```
    }
```

```
    Serial.print("Received = ");
```

```
    Serial.println(senderId);
```

```
    delay(500);
```

```
  }
```

```
}
```

```
*****
```



lvkemaker (/member/lvkemaker) ▶ [cts_casemod \(/member/cts_casemod\)](#)

[Reply](#)

Hi! can you help me? i want to send 6 different messages,
have you any ideas? thanks so much.

9 months ago



Baguda (/member/Baguda)

10 months ago

[Reply](#)

What exactly is the "pipe" variable? Is it something like an address? Does changing this allow more than one pair of transceivers to operate simultaneously?



rpangga (/member/rpangga)

10 months ago

[Reply](#)

Thanks a lot. It's so helpful for me :)



SuryaP42 (/member/SuryaP42)

11 months ago

[Reply](#)

Hi Guys!

Need a help. I have been working on a project that controls car wirelessly using NRF24L01. well, I have used four buttons for the directions. The problem is message is sent randomly(not junk values) even if I dont press any buttons.

my code is as follows:

Transmitter:

```
#include <SPI.h>
#include <nRF24L01.h>
#include <RF24.h>
RF24 radio(9, 10);
const uint64_t pipe=0xE8E8F0F0E1LL;
int fkey = 3;
int bkey = 4;
int rkey = 5;
int lkey = 6;
void setup(void) {
  pinMode(fkey, INPUT);
  pinMode(bkey, INPUT);
  pinMode(rkey, INPUT);
  pinMode(lkey, INPUT);
  radio.begin();
  radio.setPayloadSize(2);
  radio.setDataRate(RF24_250KBPS);
  radio.openWritingPipe(pipe);
  radio.stopListening();
}
void loop(void) {
  if (digitalRead(fkey)==HIGH &&digitalRead(bkey)==LOW &&
  digitalRead(rkey)==LOW &&digitalRead(lkey)==LOW)
  {
    char msg[] = "A";
    radio.write(&msg, sizeof(msg));
  }
}
```

```

else if (digitalRead(bkey)==
HIGH&&digitalRead(fkey)==LOW&&digitalRead(rkey)==LOW&&digitalRead(lkey)==LOW)
{
char msg[] = "B";
radio.write(&msg, sizeof(msg));
}

else if
(digitalRead(fkey)==LOW&&digitalRead(bkey)==LOW&&digitalRead(rkey)==HIGH&&digitalRead(lkey)==LOW)
{
char msg[] = "C";
radio.write(&msg, sizeof(msg));
}

else if
(digitalRead(fkey)==LOW&&digitalRead(bkey)==LOW&&digitalRead(rkey)==LOW
&&digitalRead(lkey)==HIGH){
char msg[] = "D";
radio.write(&msg, sizeof(msg));
}
}

```

RECEIVER:

```

#include <SPI.h>
#include <nRF24L01.h>
#include <RF24.h>
char msg[32]={0};
RF24 radio(9,10);
const uint64_t pipe =0xE8E8F0F0E1LL;
int mot1f=3;
int mot1b=4;
int mot2f=6;
int mot2b=5;
void setup(void)
{
Serial.begin(9600);
radio.begin();
radio.setPayloadSize(2);
radio.setDataRate(RF24_250KBPS);
radio.openReadingPipe(1,pipe);
radio.startListening();
pinMode(mot1f,OUTPUT);
pinMode(mot1b,OUTPUT);
pinMode(mot2f,OUTPUT);
pinMode(mot2b,OUTPUT);
}

void loop(void){
if (radio.available())
{
radio.read(&msg, sizeof(msg));
Serial.println(msg);
}
}

```

```

if(msg=="A")
{
digitalWrite(mot1f,HIGH);
digitalWrite(mot1b,LOW);
digitalWrite(mot2f,HIGH);
digitalWrite(mot2b,LOW);
}
else if(msg=="B")
{
digitalWrite(mot1b,HIGH);
digitalWrite(mot2b,HIGH);
digitalWrite(mot1f,LOW);
digitalWrite(mot2f,LOW);
}
else if(msg=="C")
{
digitalWrite(mot1f,HIGH);
digitalWrite(mot1b,LOW);
digitalWrite(mot2f,LOW);
digitalWrite(mot2b,LOW);
}
else if(msg=="D")
{
digitalWrite(mot2f,HIGH);
digitalWrite(mot2b,LOW);
digitalWrite(mot1f,LOW);
digitalWrite(mot1b,LOW);
}
else
{
digitalWrite(mot1f,LOW);
digitalWrite(mot1b,LOW);
digitalWrite(mot2f,LOW);
digitalWrite(mot2b,LOW);
}
}
}
}

```



learn4ever (/member/learn4ever) ▶ SuryaP42 (/member/SuryaP42)

Reply

10 months ago

Check the internet for PinMode with INPUT_PULLUP and also look for "debounce" push buttons.

2 things that will go wrong when you use push buttons simply connected as open switch: it will float and (aside from the "floating" input) when you press it, it will bounce.

Also beware that (especially brushed) electromotors produce a lot of RF interference so that could also be part of your problem, make sure to put capacitors over the motor inputs. Finally try not to power your motor with

the same power lines as the RF module



buderosdad1 (/member/buderosdad1) ▶ SuryaP42 (/member/SuryaP42)

Reply

10 months ago

Actually sounds like your problem is the input switches. Do you have a load resistor on them? Inputs can not be left unreferenced, if that is a word.



MattN49 (/member/MattN49)

10 months ago

Reply

I am trying to use one transmitter to cycle through communications with receiver arduinos. I am trying to open pipe1 to receiver1, transmit data, receive a value from the receiver, and close that pipe. Open pipe2, transmit, receive, close pipe two. repeat through all four receivers. I'm not sure how I set the transmitter to change writing pipes or how to use ACK to automatically check for the returned value rather than switching between transmitting and receiving. Appreciate any help.



MohammadS107 (/member/MohammadS107)

11 months ago

Reply

Hi Guys !

Please HELP !

Arduino: 1.6.6 (Windows 7), Board: "Arduino/Genuino Uno"

libraries\RF24\RF24.cpp.o: In function `SPIClass::setBitOrder(unsigned char)':

C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:293: multiple
definition of `RF24::csn(int)'

sketch\RF24.cpp.o:C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:293: first defined
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definition of `RF24::ce(int)'

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definition of `RF24::read_register(unsigned char, unsigned char*, unsigned
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definition of `RF24::write_payload(void const*, unsigned char)'

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(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:293: multiple
definition of `RF24::flush_rx()'

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(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:209: first defined
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char)':

C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:293: multiple
definition of `RF24::flush_tx()'

sketch\RF24.cpp.o:C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:209: first defined
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libraries\RF24\RF24.cpp.o: In function `SPIClass::setBitOrder(unsigned
char)':

C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:293: multiple
definition of `RF24::get_status()'

sketch\RF24.cpp.o:C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:209: first defined
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libraries\RF24\RF24.cpp.o: In function `SPIClass::setBitOrder(unsigned
char)':

C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:293: multiple
definition of `RF24::print_status(unsigned char)'

sketch\RF24.cpp.o:C:\Program Files
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char)':

C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:293: multiple
definition of `RF24::print_observe_tx(unsigned char)'

sketch\RF24.cpp.o:C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:209: first defined
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char)':

C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:293: multiple
definition of `RF24::print_byte_register(char const*, unsigned char, unsigned
char)'

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definition of `RF24::print_address_register(char const*, unsigned char,
unsigned char)'

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C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:293: multiple
definition of `RF24::setChannel(unsigned char)'

sketch\RF24.cpp.o:C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:209: first defined
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libraries\RF24\RF24.cpp.o: In function `SPIClass::setBitOrder(unsigned
char)':

C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:293: multiple
definition of `RF24::setPayloadSize(unsigned char)'

sketch\RF24.cpp.o:C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:209: first defined
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definition of `RF24::getPayloadSize()'

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char)':

C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:293: multiple
definition of `RF24::startListening()'

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(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:209: first defined
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libraries\RF24\RF24.cpp.o: In function `SPIClass::setBitOrder(unsigned
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definition of `RF24::stopListening()'

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(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:209: first defined
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libraries\RF24\RF24.cpp.o: In function `SPIClass::setBitOrder(unsigned
char)':

C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:293: multiple
definition of `RF24::powerDown()'

sketch\RF24.cpp.o:C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:209: first defined
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libraries\RF24\RF24.cpp.o: In function `SPIClass::setBitOrder(unsigned
char)':

C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:293: multiple
definition of `RF24::powerUp()'

sketch\RF24.cpp.o:C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:209: first defined
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libraries\RF24\RF24.cpp.o: In function `SPIClass::setBitOrder(unsigned
char)':

C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:293: multiple
definition of `RF24::startWrite(void const*, unsigned char)'

sketch\RF24.cpp.o:C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:209: first defined
here

libraries\RF24\RF24.cpp.o: In function `SPIClass::setBitOrder(unsigned
char)':

C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:293: multiple
definition of `RF24::getDynamicPayloadSize()'

sketch\RF24.cpp.o:C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:209: first defined
here

libraries\RF24\RF24.cpp.o: In function `SPIClass::setBitOrder(unsigned
char)':

C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:293: multiple
definition of `RF24::available(unsigned char*)'

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char)':

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definition of `RF24::available()'

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libraries\RF24\RF24.cpp.o: In function `SPIClass::setBitOrder(unsigned
char)':

C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:293: multiple
definition of `RF24::read(void*, unsigned char)'

sketch\RF24.cpp.o:C:\Program Files
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char)':

C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:293: multiple
definition of `RF24::whatHappened(bool&, bool&, bool&)'

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definition of `RF24::write(void const*, unsigned char)'

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char)':

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definition of `RF24::openWritingPipe(unsigned long long)'

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definition of `RF24::openReadingPipe(unsigned char, unsigned long long)'

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char)':

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definition of `RF24::toggle_features()'

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char)':

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definition of `RF24::enableDynamicPayloads()'

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C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:293: multiple
definition of `RF24::enableAckPayload()'

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definition of `RF24::writeAckPayload(unsigned char, void const*, unsigned
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(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:293: multiple
definition of `RF24::isAckPayloadAvailable()'

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definition of `RF24::isPVariant()'

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definition of `RF24::setAutoAck(bool)'

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C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:293: multiple
definition of `RF24::testCarrier()'

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char)':

C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:293: multiple
definition of `RF24::testRPD()'

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char)':

C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:293: multiple
definition of `RF24::setPALevel(rf24_pa_dbm_e)'

sketch\RF24.cpp.o:C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:209: first defined
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C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:293: multiple
definition of `RF24::getPALevel()'

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char)':

C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:293: multiple
definition of `RF24::setDataRate(rf24_datarate_e)'

sketch\RF24.cpp.o:C:\Program Files
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definition of `RF24::getDataRate()'

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char)':

C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:293: multiple
definition of `RF24::setCRCLength(rf24_crclength_e)'

sketch\RF24.cpp.o:C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:209: first defined
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char)':

C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:293: multiple
definition of `RF24::begin()'

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definition of `RF24::getCRCLength()'

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definition of `RF24::printDetails()'

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(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:293: multiple
definition of `RF24::disableCRC()'

sketch\RF24.cpp.o:C:\Program Files
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char)':

C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:293: multiple
definition of `RF24::setRetries(unsigned char, unsigned char)'

sketch\RF24.cpp.o:C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:209: first defined
here

collect2.exe: error: ld returned 1 exit status

exit status 1

Error compiling.

This report would have more information with

"Show verbose output during compilation"

enabled in File > Preferences.



GirishS10 (/member/GirishS10) ▶ MohammadS107 (/member/MohammadS107)

11 months ago

[Reply](#)

You probably have two copies of SPI.c and RF24.c
files in your computer.



TabbyM (/member/TabbyM)

11 months ago

[Reply](#)

Assalam-o-alikum sir..

i need some helo regarding wireless communication using nrf24l01+ modules.
m working on a project that measures current from mains and transmits it
wirelessly for further actions.

my problem is that m unable to understand the built in libraries for nrf module.
they are rather complex.

i want to write a simple code that can do the job.

i-e transmit the value of current from transmitting device to receiving device.

jazakallahu kher in advance. :)



MohammadS107 (/member/MohammadS107)

11 months ago

[Reply](#)

Hi Guys !

Please HELP !

Arduino: 1.6.6 (Windows 7), Board: "Arduino/Genuino Uno"

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definition of `RF24::ce(int)'

sketch\RF24.cpp.o:C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:209: first defined
here

libraries\RF24\RF24.cpp.o: In function `SPIClass::setBitOrder(unsigned
char)':

C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:293: multiple
definition of `RF24::read_register(unsigned char, unsigned char*, unsigned
char)'

sketch\RF24.cpp.o:C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:209: first defined
here

libraries\RF24\RF24.cpp.o: In function `SPIClass::setBitOrder(unsigned
char)':

C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:293: multiple
definition of `RF24::read_register(unsigned char)'

sketch\RF24.cpp.o:C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:209: first defined
here

libraries\RF24\RF24.cpp.o: In function `SPIClass::setBitOrder(unsigned
char)':

C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:293: multiple
definition of `RF24::write_register(unsigned char, unsigned char const*,
unsigned char)'

sketch\RF24.cpp.o:C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:209: first defined
here

libraries\RF24\RF24.cpp.o: In function `SPIClass::setBitOrder(unsigned
char)':

C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:293: multiple
definition of `RF24::write_register(unsigned char, unsigned char)'

sketch\RF24.cpp.o:C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:209: first defined
here

libraries\RF24\RF24.cpp.o: In function `SPIClass::setBitOrder(unsigned
char)':

C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:293: multiple
definition of `RF24::write_payload(void const*, unsigned char)'

sketch\RF24.cpp.o:C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:209: first defined
here

libraries\RF24\RF24.cpp.o: In function `SPIClass::setBitOrder(unsigned
char)':

C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:293: multiple
definition of `RF24::read_payload(void*, unsigned char)'

sketch\RF24.cpp.o:C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:209: first defined
here

libraries\RF24\RF24.cpp.o: In function `SPIClass::setBitOrder(unsigned
char)':

C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:293: multiple
definition of `RF24::flush_rx()'

sketch\RF24.cpp.o:C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:209: first defined
here

libraries\RF24\RF24.cpp.o: In function `SPIClass::setBitOrder(unsigned
char)':

C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:293: multiple
definition of `RF24::flush_tx()'

sketch\RF24.cpp.o:C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:209: first defined
here

libraries\RF24\RF24.cpp.o: In function `SPIClass::setBitOrder(unsigned
char)':

C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:293: multiple
definition of `RF24::get_status()'

sketch\RF24.cpp.o:C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:209: first defined
here

libraries\RF24\RF24.cpp.o: In function `SPIClass::setBitOrder(unsigned
char)':

C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:293: multiple
definition of `RF24::print_status(unsigned char)'

sketch\RF24.cpp.o:C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:209: first defined
here

libraries\RF24\RF24.cpp.o: In function `SPIClass::setBitOrder(unsigned
char)':

C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:293: multiple
definition of `RF24::print_observe_tx(unsigned char)'

sketch\RF24.cpp.o:C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:209: first defined
here

libraries\RF24\RF24.cpp.o: In function `SPIClass::setBitOrder(unsigned
char)':

C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:293: multiple
definition of `RF24::print_byte_register(char const*, unsigned char, unsigned
char)'

sketch\RF24.cpp.o:C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:209: first defined
here

libraries\RF24\RF24.cpp.o: In function `SPIClass::setBitOrder(unsigned
char)':

C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:293: multiple
definition of `RF24::print_address_register(char const*, unsigned char,
unsigned char)'

sketch\RF24.cpp.o:C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:209: first defined
here

libraries\RF24\RF24.cpp.o: In function `SPIClass::setBitOrder(unsigned
char)':

C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:293: multiple
definition of `RF24::RF24(unsigned char, unsigned char)'

sketch\RF24.cpp.o:C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:209: first defined
here

libraries\RF24\RF24.cpp.o: In function `SPIClass::setBitOrder(unsigned
char)':

C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:293: multiple
definition of `RF24::RF24(unsigned char, unsigned char)'

sketch\RF24.cpp.o:C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:209: first defined
here

libraries\RF24\RF24.cpp.o: In function `SPIClass::setBitOrder(unsigned
char)':

C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:293: multiple
definition of `RF24::setChannel(unsigned char)'

sketch\RF24.cpp.o:C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:209: first defined
here

libraries\RF24\RF24.cpp.o: In function `SPIClass::setBitOrder(unsigned
char)':

C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:293: multiple
definition of `RF24::setPayloadSize(unsigned char)'

sketch\RF24.cpp.o:C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:209: first defined
here

libraries\RF24\RF24.cpp.o: In function `SPIClass::setBitOrder(unsigned
char)':

C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:293: multiple
definition of `RF24::getPayloadSize()'

sketch\RF24.cpp.o:C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:209: first defined
here

libraries\RF24\RF24.cpp.o: In function `SPIClass::setBitOrder(unsigned
char)':

C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:293: multiple
definition of `RF24::startListening()'

sketch\RF24.cpp.o:C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:209: first defined
here

libraries\RF24\RF24.cpp.o: In function `SPIClass::setBitOrder(unsigned
char)':

C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:293: multiple
definition of `RF24::stopListening()'

sketch\RF24.cpp.o:C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:209: first defined
here

libraries\RF24\RF24.cpp.o: In function `SPIClass::setBitOrder(unsigned
char)':

C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:293: multiple
definition of `RF24::powerDown()'

sketch\RF24.cpp.o:C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:209: first defined
here

libraries\RF24\RF24.cpp.o: In function `SPIClass::setBitOrder(unsigned
char)':

C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:293: multiple
definition of `RF24::powerUp()'

sketch\RF24.cpp.o:C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:209: first defined
here

libraries\RF24\RF24.cpp.o: In function `SPIClass::setBitOrder(unsigned
char)':

C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:293: multiple
definition of `RF24::startWrite(void const*, unsigned char)'

sketch\RF24.cpp.o:C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:209: first defined
here

libraries\RF24\RF24.cpp.o: In function `SPIClass::setBitOrder(unsigned
char)':

C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:293: multiple
definition of `RF24::getDynamicPayloadSize()'

sketch\RF24.cpp.o:C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:209: first defined
here

libraries\RF24\RF24.cpp.o: In function `SPIClass::setBitOrder(unsigned
char)':

C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:293: multiple
definition of `RF24::available(unsigned char*)'

sketch\RF24.cpp.o:C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:209: first defined
here

libraries\RF24\RF24.cpp.o: In function `SPIClass::setBitOrder(unsigned
char)':

C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:293: multiple
definition of `RF24::available()'

sketch\RF24.cpp.o:C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:209: first defined
here

libraries\RF24\RF24.cpp.o: In function `SPIClass::setBitOrder(unsigned
char)':

C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:293: multiple
definition of `RF24::read(void*, unsigned char)'

sketch\RF24.cpp.o:C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:209: first defined
here

libraries\RF24\RF24.cpp.o: In function `SPIClass::setBitOrder(unsigned
char)':

C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:293: multiple
definition of `RF24::whatHappened(bool&, bool&, bool&)'

sketch\RF24.cpp.o:C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:209: first defined
here

libraries\RF24\RF24.cpp.o: In function `SPIClass::setBitOrder(unsigned
char)':

C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:293: multiple
definition of `RF24::write(void const*, unsigned char)'

sketch\RF24.cpp.o:C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:209: first defined
here

libraries\RF24\RF24.cpp.o: In function `SPIClass::setBitOrder(unsigned
char)':

C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:293: multiple
definition of `RF24::openWritingPipe(unsigned long long)'

sketch\RF24.cpp.o:C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:209: first defined
here

libraries\RF24\RF24.cpp.o: In function `SPIClass::setBitOrder(unsigned
char)':

C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:293: multiple
definition of `RF24::openReadingPipe(unsigned char, unsigned long long)'

sketch\RF24.cpp.o:C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:209: first defined
here

libraries\RF24\RF24.cpp.o: In function `SPIClass::setBitOrder(unsigned
char)':

C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:293: multiple
definition of `RF24::toggle_features()'

sketch\RF24.cpp.o:C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:209: first defined
here

libraries\RF24\RF24.cpp.o: In function `SPIClass::setBitOrder(unsigned
char)':

C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:293: multiple
definition of `RF24::enableDynamicPayloads()'

sketch\RF24.cpp.o:C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:209: first defined
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libraries\RF24\RF24.cpp.o: In function `SPIClass::setBitOrder(unsigned
char)':

C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:293: multiple
definition of `RF24::enableAckPayload()'

sketch\RF24.cpp.o:C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:209: first defined
here

libraries\RF24\RF24.cpp.o: In function `SPIClass::setBitOrder(unsigned
char)':

C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:293: multiple
definition of `RF24::writeAckPayload(unsigned char, void const*, unsigned
char)'

sketch\RF24.cpp.o:C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:209: first defined
here

libraries\RF24\RF24.cpp.o: In function `SPIClass::setBitOrder(unsigned
char)':

C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:293: multiple
definition of `RF24::isAckPayloadAvailable()'

sketch\RF24.cpp.o:C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:209: first defined
here

libraries\RF24\RF24.cpp.o: In function `SPIClass::setBitOrder(unsigned
char)':

C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:293: multiple
definition of `RF24::isPVariant()'

sketch\RF24.cpp.o:C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:209: first defined
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libraries\RF24\RF24.cpp.o: In function `SPIClass::setBitOrder(unsigned
char)':

C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:293: multiple
definition of `RF24::setAutoAck(bool)'

sketch\RF24.cpp.o:C:\Program Files
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libraries\RF24\RF24.cpp.o: In function `SPIClass::setBitOrder(unsigned
char)':

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definition of `RF24::setAutoAck(unsigned char, bool)'

sketch\RF24.cpp.o:C:\Program Files
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here

libraries\RF24\RF24.cpp.o: In function `SPIClass::setBitOrder(unsigned
char)':

C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:293: multiple
definition of `RF24::testCarrier()'

sketch\RF24.cpp.o:C:\Program Files
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here

libraries\RF24\RF24.cpp.o: In function `SPIClass::setBitOrder(unsigned
char)':

C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:293: multiple
definition of `RF24::testRPD()'

sketch\RF24.cpp.o:C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:209: first defined
here

libraries\RF24\RF24.cpp.o: In function `SPIClass::setBitOrder(unsigned
char)':

C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:293: multiple
definition of `RF24::setPALevel(rf24_pa_dbm_e)'

sketch\RF24.cpp.o:C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:209: first defined
here

libraries\RF24\RF24.cpp.o: In function `SPIClass::setBitOrder(unsigned
char)':

C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:293: multiple
definition of `RF24::getPALevel()'

sketch\RF24.cpp.o:C:\Program Files
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here

libraries\RF24\RF24.cpp.o: In function `SPIClass::setBitOrder(unsigned
char)':

C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:293: multiple
definition of `RF24::setDataRate(rf24_datarate_e)'

sketch\RF24.cpp.o:C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:209: first defined
here

libraries\RF24\RF24.cpp.o: In function `SPIClass::setBitOrder(unsigned
char)':

C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:293: multiple
definition of `RF24::getDataRate()'

sketch\RF24.cpp.o:C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:209: first defined
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libraries\RF24\RF24.cpp.o: In function `SPIClass::setBitOrder(unsigned
char)':

C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:293: multiple
definition of `RF24::setCRCLength(rf24_crclength_e)'

sketch\RF24.cpp.o:C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:209: first defined
here

libraries\RF24\RF24.cpp.o: In function `SPIClass::setBitOrder(unsigned
char)':

C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:293: multiple
definition of `RF24::begin()'

sketch\RF24.cpp.o:C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:209: first defined
here

libraries\RF24\RF24.cpp.o: In function `SPIClass::setBitOrder(unsigned
char)':

C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:293: multiple
definition of `RF24::getCRCLength()'

sketch\RF24.cpp.o:C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:209: first defined
here

libraries\RF24\RF24.cpp.o: In function `SPIClass::setBitOrder(unsigned
char)':

C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:293: multiple
definition of `RF24::printDetails()'

sketch\RF24.cpp.o:C:\Program Files
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here

libraries\RF24\RF24.cpp.o: In function `SPIClass::setBitOrder(unsigned
char)':

C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:293: multiple
definition of `RF24::disableCRC()'

sketch\RF24.cpp.o:C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:209: first defined
here

libraries\RF24\RF24.cpp.o: In function `SPIClass::setBitOrder(unsigned
char)':

C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:293: multiple
definition of `RF24::setRetries(unsigned char, unsigned char)'

sketch\RF24.cpp.o:C:\Program Files
(x86)\Arduino\hardware\arduino\avr\libraries\SPI\SPI.h:209: first defined
here

collect2.exe: error: ld returned 1 exit status

exit status 1

Error compiling.

This report would have more information with

"Show verbose output during compilation"

enabled in File > Preferences.



sarge8306 (/member/sarge8306)

11 months ago

Reply

Thank you very much for this tutorial. To assist anyone else who has suffered the same issue I did (due to my lack of experience), the pin assignment does not work with the Arduino mega 2560. The CE connection *can* connect to pin 40

instead of 9; the CSN must connect to 53 rather than 10; MOSI is 51 instead of 11; MISO is 50 instead of 12; and SCK is 52 instead of 13. Of course the power and ground will still go to 3.3v and GND. I apologize if this has already been posted, a lot of responses to pilfer through :). Hope this can help someone.



sarge8306 (/member/sarge8306) ▶ sarge8306 (/member/sarge8306)

Reply

And ensure to change the code for the changes. RF24 radio(11 months ago
xx,xx) it will be 40, 53



AnneSibug10 (/member/AnneSibug10)

11 months ago

Reply

Sir can I ask something? Our project uses GUI, and the transmitter side uses Arduino Uno, then on the receiver side we're using Arduino Nano. If we copy your codes, can we have the same results as yours? Thank you sir :)



Mashtic (/member/Mashtic)

11 months ago

Reply

Do this files function in a mac??

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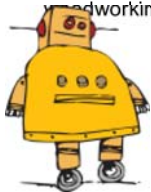
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