

```

1  #ifndef F_CPU
2  #define F_CPU 16000000UL
3  #endif
4  #include <avr/io.h>
5  #include <util/delay.h>
6  #include <avr/interrupt.h>
7  #include <stdlib.h>
8  #include <string.h>
9  #include <stdbool.h>
10 #include <stdint.h>
11
12 #include "nrf24.h"
13
14 void initIO();
15
16 int main(void)
17 {
18     //sei();    // Interrupts on
19     initIO();
20     nrf24_initRF_SAFE(MAIN_BOARD, RECEIVE); // CONNECTION TO MAIN BOARD : GENERAL RF CHANNEL 112
21
22     while (1)
23     {
24         if(nrf24_dataReady())
25         {
26             nrf24_getData(command_buffer);
27             CommandStatus status = DecomposeMessageFromBuffer();
28             if (status==SUCCESSFUL_DECOMPOSITION) { HandleAvailableCommand(); }
29             else
30             {
31                 bit_flip(PORTD, BIT(7)); _delay_ms(250); bit_flip(PORTD, BIT(7));
32             }
33         }
34         if (nrf24_checkAvailability()==false) { nrf24_initRF_SAFE(MAIN_BOARD, RECEIVE); }
35     }
36 }
37
38
39 void initIO(){
40     /*
41     Input/Output pin initialization
42     1 : OUTPUT | 0 : INPUT | 0b76543210 Bit order
43     ATTACHMENTS
44     RELAY 0      : PD3          | OUTPUT
45     RELAY 1      : PD2          | OUTPUT
46     RELAY 2      : PD6          | OUTPUT
47     RELAY 3      : PD5          | OUTPUT
48     RED LED      : PD7          | OUTPUT
49     GREEN LED    : PB0          | OUTPUT

```

```
50     nRF24L01
51         CE   : PC0           |   OUTPUT
52         CSN  : PC1           |   OUTPUT
53         MISO : PD0 (MSPIM MISO ATMEGA) |   INPUT
54         MOSI : PD1 (MSPIM MOSI ATMEGA) |   OUTPUT
55         SCK  : PD4 (MSPIM XCK)         |   OUTPUT
56     */
57     DDRD = 0b11111110;
58     DDRB = 0b00101001;
59     DDRC = 0b11011111;
60 }
61
62
63
64
65
66
```