

## Interfacing wireless 433 MHz

### Sistem Kerja Alat:

Komunikasi menggunakan wireless 433 MHz. Terdapat 2 modul wireless yaitu module transmitter sebagai pengirim data wireless dan module receiver sebagai penerima data wireless.

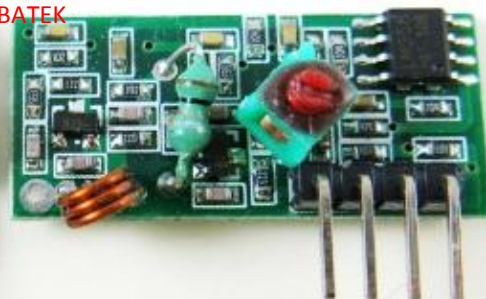
### Kebutuhan Hardware :

- Module RF Module 433 Mhz
- Modul Arduino UNO
- Power supply +9Volt

Module Transmitter



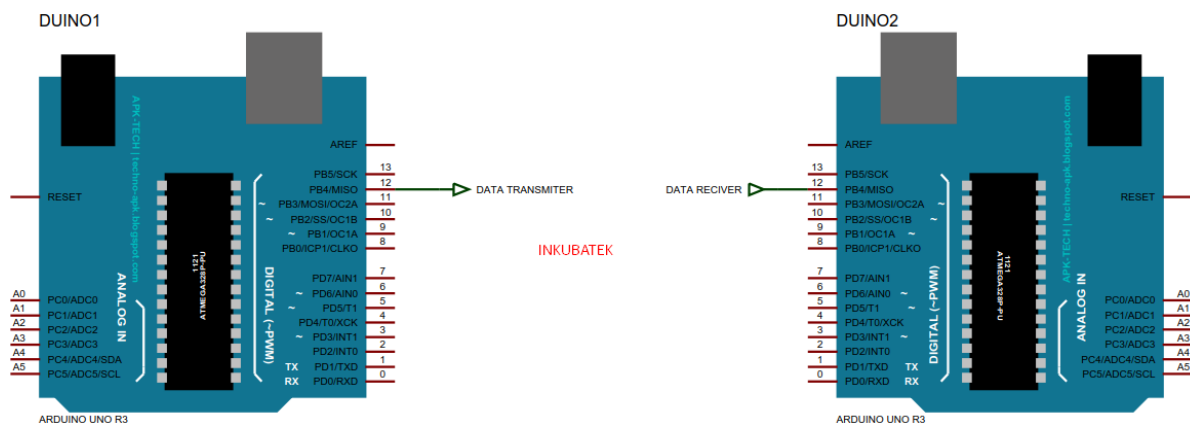
Module Reciver



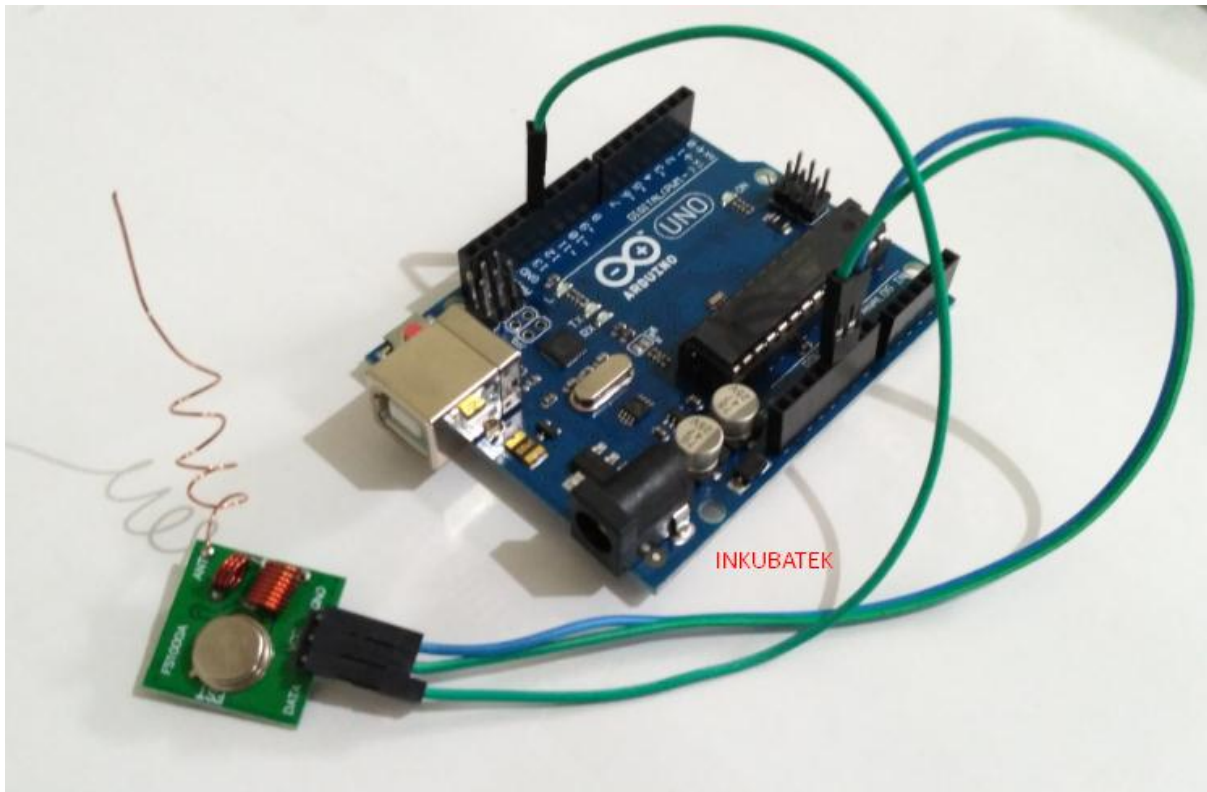
### Diagram Blok:



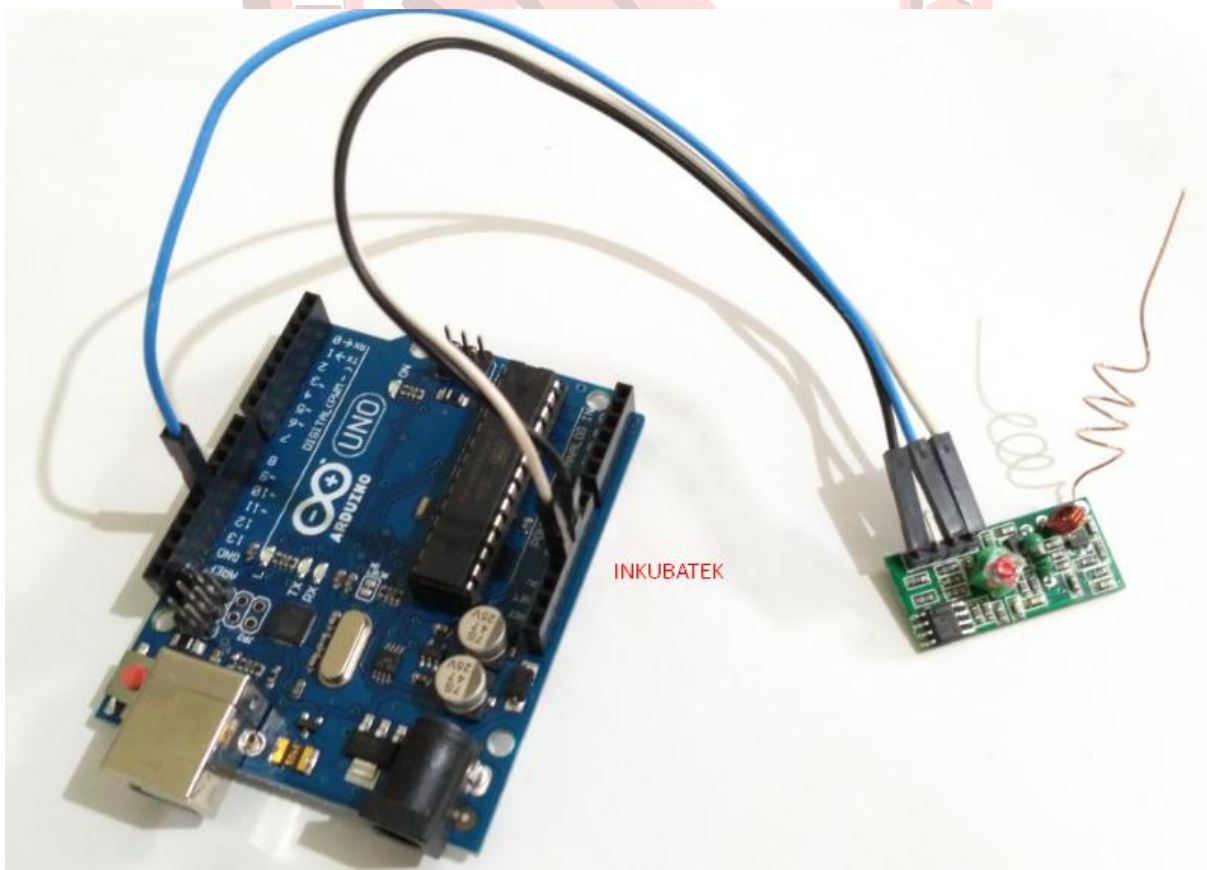
### Schematics



Transmitter:



Reciver:



Koneksi Module Transmitter:

Pin ARDUINO	Koneksi
12	DATA
VCC	5V
GND	GND

Koneksi Module Reciver:

Pin ARDUINO	Koneksi
12	DATA
VCC	5V
GND	GND

Source Code/Sketch :

Reciver:

```

/*****
* Program : Project Reciver
* Input  : Modul RF Module 433 Mhz
* Output : Serial Monitor
* 125 Proyek Arduino Inkubatek
* www.tokotronik.com
* *****/

#include <VirtualWire.h>
String inString="";
void setup(){
  Serial.begin(9600);
  Serial.println("Interfacing Arduino dg Wireless 433MHz");
  vw_set_ptt_inverted(true); // Required for DR3100
  vw_set_rx_pin(12);
  vw_setup(4000); // Bits per sec
  vw_rx_start();  // Start the receiver PLL running
}

void loop(){
  uint8_t buf[VW_MAX_MESSAGE_LEN]; //data RF
  uint8_t buflen = VW_MAX_MESSAGE_LEN; //panjang data

  if (vw_get_message(buf, &buflen)){ // Non-blocking
    inString="";
  }
}

```

```

    for(char i; i<buflen; i++){
        inString += char(buf[i]);
    }
    Serial.println(inString);
}
}

```

### Transmitter:

```

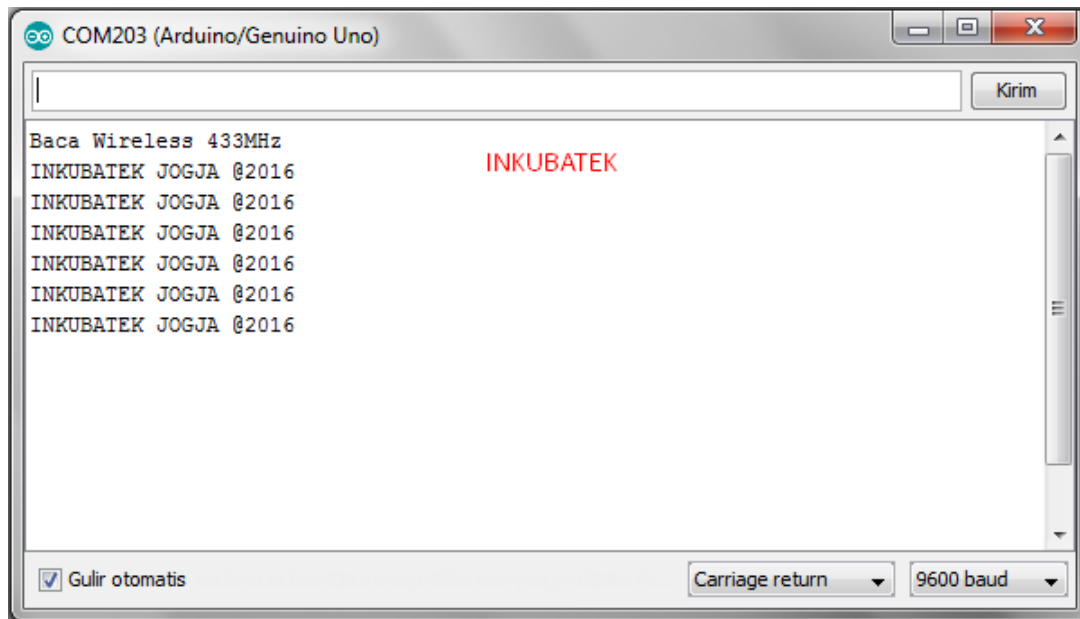
/*****
* Program : Project Reciver
* Input  : Modul RF Module 433 Mhz
* Output : Serial Monitor
* 125 Proyek Arduino Inkubatek
* www.tokotronik.com
* *****/
#include <VirtualWire.h>
char *controller;
void setup() {
    Serial.begin(9600);
    pinMode(13,OUTPUT);
    vw_set_ptt_inverted(true); //
    vw_set_tx_pin(12);
    vw_setup(4000); // speed of data transfer Kbps
}

void loop(){
    controller="INKUBATEK JOGJA @2016";
    vw_send((uint8_t *)controller, strlen(controller));
    vw_wait_tx(); // Wait until the whole message is gone
    digitalWrite(13,1);
    delay(100);
    digitalWrite(13,0);
    delay(1000);
}

```

### Jalannya Alat :

Data wireless yang dikirim berupa tulisan "INKUBATEK JOGJA @2016". Buka serial monitor pada program sketch Arduino yang terhubung dengan com Reciver. Hasilnya sebagai berikut:



[Uji coba memakai hardware “Master Mikro ARDUINO V2” :  
<http://tokotronik.com/master-mikro-arduino-v2/> ]