

LAMPIRAN A

Program Arduino



```
#include <Wire.h>

#define DEC 10

#define BLYNK_PRINT Serial // Comment this out to disable prints and save space

#include <ESP8266_Lib.h>

#include <BlynkSimpleShieldEsp8266.h>

#include <SimpleTimer.h>

#include <LCD.h>

#include <LiquidCrystal_I2C.h>

SimpleTimer timer;

#define I2C_ADDR 0x3F

#define BACKLIGHT_PIN 3

#define BACKLIGHT_POL POSITIVE

#define EN_PIN 2

#define RW_PIN 1

#define RS_PIN 0

#define D4_PIN 4

#define D5_PIN 5

#define D6_PIN 6

#define D7_PIN 7

LiquidCrystal_I2C lcd(I2C_ADDR, EN_PIN, RW_PIN, RS_PIN, D4_PIN, D5_PIN, D6_PIN,
D7_PIN, BACKLIGHT_PIN, BACKLIGHT_POL);

//You should get Auth Token in the Blynk App.

// Go to the Project Settings (nut icon).

char auth[] = "20278cd397d34be1b115696171520d1d";

// Your WiFi credentials.
```

```
// Set password to "" for open networks.

char ssid[] = "SUDIP";

char pass[] = "1021311052";

const int relay=6;

const int relay1=7;

#define EspSerial Serial3

#define ESP8266_BAUD 115200

ESP8266 wifi(&EspSerial);

void sendUptime()

{

    int sensorValue = analogRead(A0);

    float Vin= sensorValue * (5 / 1023.0);

    float Vref=3.76;

    float ppm=9.47265625 * Vin / Vref * 1023;

    Blynk.virtualWrite(1, ppm);

    Blynk.virtualWrite(0, Vin);

}

void setup() {

    pinMode(relay,OUTPUT);

    pinMode(relay1,OUTPUT);

    pinMode(A0,INPUT);

    Serial.begin(9600);

    lcd.begin(16,2);

    EspSerial.begin(ESP8266_BAUD);

    delay(10);
```

```
Blynk.begin(auth, wifi, ssid, pass);  
  
timer.setInterval(1000L, sendUptime);  
  
// put your setup code here, to run once:  
  
}
```

```
void loop() {  
  
  int sensorValue = analogRead(A0);  
  
  float Vin= sensorValue * (5 / 1023.0);  
  
  float Vref=5;  
  
  float ppm=9.47265625 * Vin / Vref * 1023;  
  
  lcd.setCursor(0,0);  
  lcd.print("PPM = ");  
  lcd.print(ppm, DEC);  
  lcd.print("ppm");  
  
  lcd.setCursor(0,1);  
  lcd.print("Vout = ");  
  lcd.print(Vin, DEC);  
  lcd.print(" V ");  
  
  if (ppm > 1000){  
    digitalWrite(relay, LOW);  
    digitalWrite(relay1,LOW);  
  } else {
```

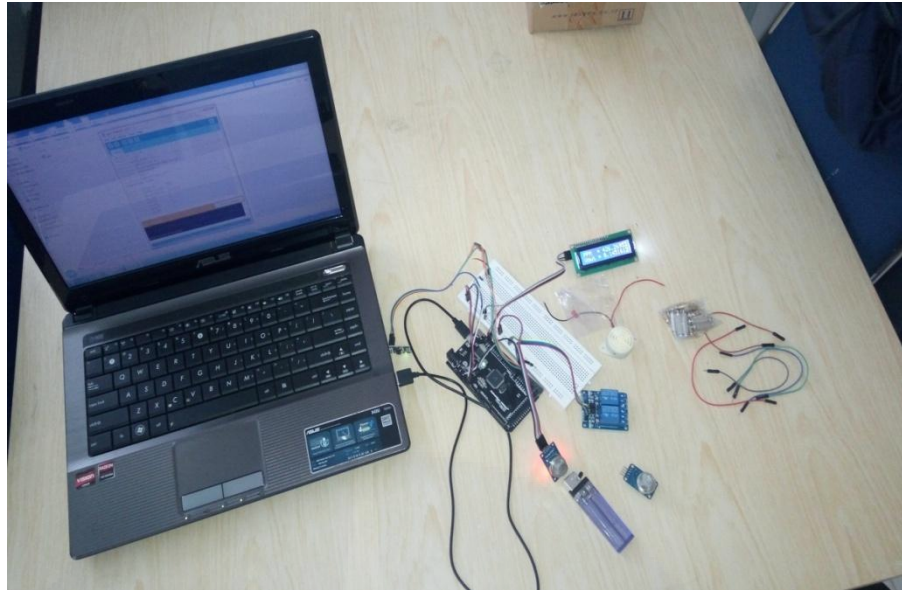
```
digitalWrite(relay, HIGH);  
digitalWrite(relay1, HIGH);  
}  
Blynk.run();  
timer.run();  
}
```



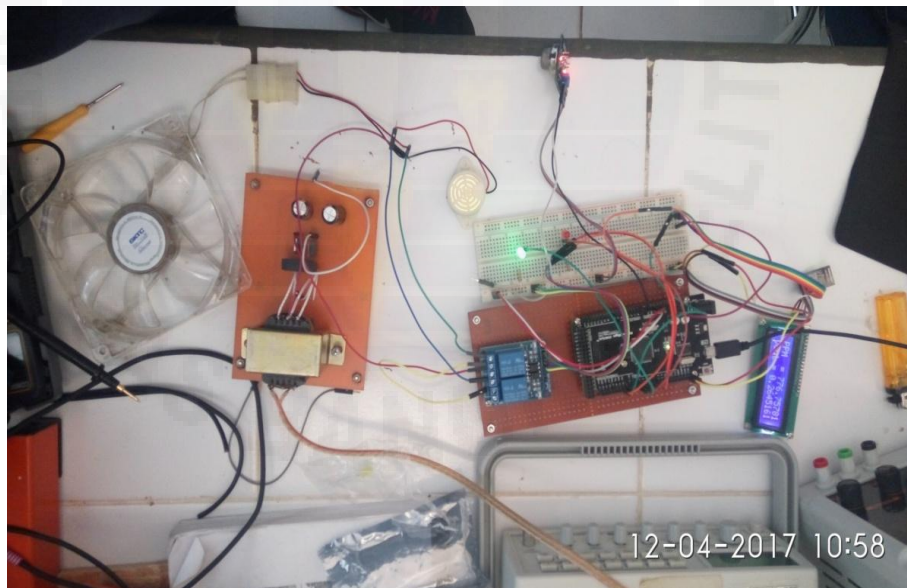
LAMPIRAN B

Lampiran Perancangan Pembuatan Pendeteksi
kebocoran gas LPG





Gambar B.1 Proses Perancangan Peralatan Dengan Program Arduino



Gambar B.2 Perakitan Komponen



Gambar B.3 Pemasangan komponen ke boks peralatan



Gambar B.4 Keseluruhan Pendeteksi kebocoran gas LPG

LAMPIRAN C

Lampiran Proses pengiriman informasi ke
smartphone pengguna



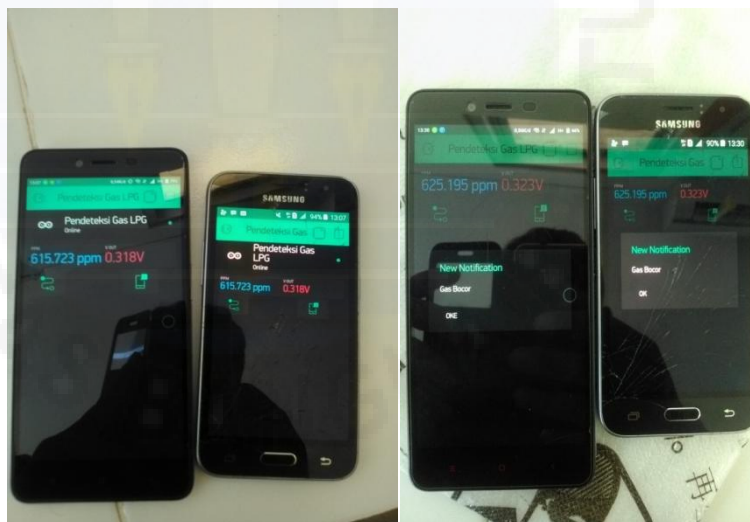
```
COM4

[126]

  _ _ _ _ _
 / _ \ / _ \ / _ \ / _ \
/_ _ \/_ _ \/_ _ \/_ _ \
 / _ \ v0.4.1 on Arduino Mega

[712] Connecting to SUDIP
[3745] AT version:0.51.0.0(Nov 27 2015 13:37:21)
SDK version:1.5.0
compile time:Nov 27 2015 13:58:02
OK
[6848] +CIFSR:STAIP,"192.168.43.160"
+CIFSR:STAMAC,"60:01:94:0c:ee:65"
[6857] Connected to WiFi
[59014] Ready (ping: 11ms).
```

Gambar C.1 Informasi akses antara arduino dan server Blynk



Gambar C.2 Antarmuka aplikasi Blynk pada *smartphone* Pengguna