

## DAFTAR PUSTAKA

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## LAMPIRAN

### Lampiran 1.

#### *Source Code Infrared Receiver*

```
#include <IRrecv.h>
#include <IRremoteESP8266.h>
#include <IRac.h>
#include <IRtext.h>
#include <IRutils.h>

const uint16_t kRecvPin = 4;
const uint32_t kBaudRate = 9600;
const uint16_t kCaptureBufferSize = 1024;

#if DECODE_AC
const uint8_t kTimeout = 50;
#else // DECODE_AC
const uint8_t kTimeout = 15;
#endif // DECODE_AC
const uint16_t kMinUnknownSize = 12;

IRrecv irrecv(kRecvPin, kCaptureBufferSize, kTimeout, true);
decode_results results;

void setup() {
  #if defined(ESP8266)
    Serial.begin(kBaudRate, SERIAL_8N1, SERIAL_TX_ONLY);
  #else // ESP8266
    Serial.begin(kBaudRate, SERIAL_8N1);
  #endif // ESP8266
  while (!Serial)
    delay(50);
  Serial.printf("\n" D_STR_IRRECVDUMP_STARTUP "\n", kRecvPin);
  #if DECODE_HASH
    irrecv.setUnknownThreshold(kMinUnknownSize);
  #endif // DECODE_HASH
  irrecv.enableIRIn(); // Start the receiver
}

void loop() {
  if (irrecv.decode(&results)) {
    uint32_t now = millis();
    Serial.printf(D_STR_TIMESTAMP " : %06u.%03u\n", now / 1000, now %
1000);
    if (results.overflow)
```

```

        Serial.printf(D_WARN_BUFFERFULL "\n", kCaptureBufferSize);
        Serial.println(D_STR_LIBRARY " : v"
_IRREMOTESP8266_VERSION_ "\n");
        Serial.print(resultToHumanReadableBasic(&results));
        String description = IRAcUtils::resultAcToString(&results);
        if (description.length()) Serial.println(D_STR_MESGDESC ": " +
description);
        yield();
#ifdef LEGACY_TIMING_INFO
        // Output legacy RAW timing info of the result.
        Serial.println(resultToTimingInfo(&results));
        yield();
#endif

        Serial.println(resultToSourceCode(&results));
        Serial.println();
        yield();
    }
}

```

## Lampiran 2.

### Source Code NodeMCU

```

#include "CTBot.h"
#include <DHT.h>
#define DHTTYPE DHT22
#include <Arduino.h>
#include <IRremoteESP8266.h>
#include <IRsend.h>
#include <ir_Samsung.h>

uint8_t pinDHT = 5;
const uint16_t kIrLed = 4; // ESP8266 GPIO pin to use. Recommended: 4 (D2).
CTBot myBot;
IRSamsungAc ac(kIrLed); // Set the GPIO to be used to sending the message
DHT dht(pinDHT,DHTTYPE); //INISIASI DHT
IRsend irsend(kIrLed);
uint16_t ac_off[227] = {3102, 1594, 524, 1114, 468, 1104, 530, 336, 430,
416, 512, 312, 514, 1100, 430, 416, 484, 364, 490, 1100, 504, 1110,
488, 336, 514, 1076, 524, 348, 486, 336, 514, 1076, 474, 1136, 516,
336, 514, 1074, 474, 1136, 520, 332, 516, 332, 500, 1084, 520, 332,
514, 332, 514, 1070, 512, 364, 490, 332, 514, 334, 500, 346, 486, 364,
488, 332, 514, 334, 500, 344, 430, 418, 490, 332, 516, 332, 500, 344,
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514, 338, 512, 1076, 472, 1138, 518, 332, 516, 332, 502, 1082, 520,
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330, 518, 328, 514, 1072, 458, 416, 492, 330, 516, 332, 500, 344,
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532, 336, 448, 396, 512, 1058, 536, 330, 450, 396, 430, 1144, 532,
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534, 1074, 460, 418, 490, 330, 516, 330, 526, 318, 430, 416, 492, 330,
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532, 330, 530, 316, 430, 1148, 528, 1074, 526, 1086, 520, 1078, 552,
1056, 540, 1062, 530}; //TCL112AC

```

```

String ssid = "prv";
String pass = "13579000";
String token = "1903873271:AAHdGIH9IsoAP9G5IMsH7T8Hz2IuNjvbFw4";

```

// Untuk Setting Perintah Pada Telegram Ganti Nama Dalam Tanda Kutip Sesuai Keinginan Anda

```

const char* Perintah_On_1 = "/NyalakanPendinginRuangan";
const char* Perintah_On_2 = "/CekSuhuKelembapan";
const char* Perintah_On_3 = "/SetTemperature16";
const char* Perintah_On_4 = "/SetTemperature17";
const char* Perintah_On_5 = "/SetTemperature18";

```

```

const char* Perintah_On_6 = "/SetTemperature19";
const char* Perintah_On_7 = "/SetTemperature20";
const char* Perintah_On_8 = "/SetTemperature21";
const char* Perintah_On_9 = "/SetTemperature22";
const char* Perintah_On_10 = "/SetTemperature23";
const char* Perintah_On_11 = "/SetTemperature24";
const char* Perintah_On_12 = "/SetTemperature25";
const char* Perintah_On_13 = "/SetTemperature26";
const char* Perintah_On_14 = "/SetTemperature27";
const char* Perintah_On_15 = "/SetTemperature28";

const char* Perintah_Off_1 = "/MatikanPendinginRuangan";

void printState() {
    // Display the settings.
    Serial.println("Samsung A/C remote is in the following state:");
    Serial.printf("  %s\n", ac.toString().c_str());
    // Display the encoded IR sequence.
    unsigned char* ir_code = ac.getRaw();
    Serial.print("IR Code: 0x");
    for (uint8_t i = 0; i < kMitsubishiACStateLength; i++)
        Serial.printf("%02X", ir_code[i]);
    Serial.println();
}

void setup() {

    ac.begin();
    irsend.begin();
    Serial.begin(9600);
    pinMode(pinDHT,INPUT);
    dht.begin();
    myBot.wifiConnect(ssid, pass);
    myBot.setTelegramToken(token);

    if (myBot.testConnection())
        Serial.println("\nKoneksi Ke BOT OK");
    else Serial.println("\nTidak Terkoneksi Ke BOT");
    Serial.println("Memulai TelegramBot...");
    Serial.println("Perintah Telegram Siap Di Fungsikan...");

}

void loop() {
    TBMessage msg;
    Serial.println("Sending...");

```

```

if (myBot.getNewMessage(msg)) {
    if (msg.text.equalsIgnoreCase(Perintah_On_1)) {
    irsend.sendRaw(ac_on,227,36);
        myBot.sendMessage(msg.sender.id, "AC Sudah Di Nyalakan");
    }

    else if (msg.text.equalsIgnoreCase(Perintah_Off_1)) {
        irsend.sendRaw(ac_off,227,36);
        myBot.sendMessage(msg.sender.id, "AC Sudah Di Matikan");
    }

    else if (msg.text.equalsIgnoreCase(Perintah_On_2)) {

float t = dht.readTemperature();
float h = dht.readHumidity();
Serial.print("Suhu : ");
Serial.print(t);
Serial.print("Kelembapan : ");
Serial.print(h);

        String suhu = "Intensitas suhu : ";
        String kelembapan = "Kelembapan : ";
        suhu += int(t);
        suhu += " *C\n";
        kelembapan += int(h);
        kelembapan += " %";
        myBot.sendMessage(msg.sender.id, suhu , "\n ");
        myBot.sendMessage(msg.sender.id, kelembapan , " ");
    }

    else if (msg.text.equalsIgnoreCase(Perintah_On_3)) {
        irsend.sendRaw(ac_temp16,227,36);
        myBot.sendMessage(msg.sender.id, "Temp AC : 16*C");
    }
    else if (msg.text.equalsIgnoreCase(Perintah_On_4)) {
        irsend.sendRaw(ac_temp17,227,36);
        myBot.sendMessage(msg.sender.id, "Temp AC : 17*C");
    }
    else if (msg.text.equalsIgnoreCase(Perintah_On_5)) {
        irsend.sendRaw(ac_temp18,227,36);
        myBot.sendMessage(msg.sender.id, "Temp AC : 18*C");
    }
    else if (msg.text.equalsIgnoreCase(Perintah_On_6)) {
        irsend.sendRaw(ac_temp19,227,36);

```

```

        myBot.sendMessage(msg.sender.id, "Temp AC : 19*C");
    }
    else if (msg.text.equalsIgnoreCase(Perintah_On_7)) {
        irsend.sendRaw(ac_temp20,227,36);
        myBot.sendMessage(msg.sender.id, "Temp AC : 20*C");
    }
    else if (msg.text.equalsIgnoreCase(Perintah_On_8)) {
        irsend.sendRaw(ac_temp21,227,36);
        myBot.sendMessage(msg.sender.id, "Temp AC : 21*C");
    }
    else if (msg.text.equalsIgnoreCase(Perintah_On_9)) {
        irsend.sendRaw(ac_temp22,227,36);
        myBot.sendMessage(msg.sender.id, "Temp AC : 22*C");
    }
    else if (msg.text.equalsIgnoreCase(Perintah_On_10)) {
        irsend.sendRaw(ac_temp23,227,36);
        myBot.sendMessage(msg.sender.id, "Temp AC : 23*C");
    }
    else if (msg.text.equalsIgnoreCase(Perintah_On_11)) {
        irsend.sendRaw(ac_temp24,227,36);
        myBot.sendMessage(msg.sender.id, "Temp AC : 24*C");
    }
    else if (msg.text.equalsIgnoreCase(Perintah_On_12)) {
        irsend.sendRaw(ac_temp25,227,36);
        myBot.sendMessage(msg.sender.id, "Temp AC : 25*C");
    }
    else if (msg.text.equalsIgnoreCase(Perintah_On_13)) {
        irsend.sendRaw(ac_temp26,227,36);
        myBot.sendMessage(msg.sender.id, "Temp AC : 26*C");
    }
    else if (msg.text.equalsIgnoreCase(Perintah_On_14)) {
        irsend.sendRaw(ac_temp27,227,36);
        myBot.sendMessage(msg.sender.id, "Temp AC : 27*C");
    }
    else if (msg.text.equalsIgnoreCase(Perintah_On_15)) {
        irsend.sendRaw(ac_temp28,227,36);
        myBot.sendMessage(msg.sender.id, "Temp AC : 28*C");
    }
}

else {
    String Balasan;
    Balasan = (String)"Selamat Datang " + msg.sender.username + (String)
        "\nPengendali Pendingin Ruangan dan Monitoring Suhu
Kelembapan."
        "\n\nGunakan Perintah Berikut:"

```



```

"\nSistem Pendingin Ruangan :\n\t"
+ String(Perintah_On_1)+"\n\t"
+ String(Perintah_Off_1)+"\n"
"\nMonitoring Suhu Kelembapan :\n\t"
+ String(Perintah_On_2)+"\n"
"\nSet Temperature :\n\t"
+ String(Perintah_On_3)+"\n\t"
+ String(Perintah_On_4)+"\n\t"
+ String(Perintah_On_5)+"\n\t"
+ String(Perintah_On_6)+"\n\t"
+ String(Perintah_On_7)+"\n\t"
+ String(Perintah_On_8)+"\n\t"
+ String(Perintah_On_9)+"\n\t"
+ String(Perintah_On_10)+"\n\t"
+ String(Perintah_On_11)+"\n\t"
+ String(Perintah_On_12)+"\n\t"
+ String(Perintah_On_13)+"\n\t"
+ String(Perintah_On_14)+"\n\t"
+ String(Perintah_On_15)+"\n\t"

```

```

;myBot.sendMessage(msg.sender.id, Balasan);
}
}
}

```

### Lampiran 3.

#### Pengukuran peletakan derajat IR LED

