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Start
BOM
Wire
Code
Test
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Setup

This is a step-by-step guide for your circuit. Click "Next step" or use the keyboard arrows. Good luck!

Place ArduinoMega

Place PIRGeneric

Place LCD16X2

Place Res220O

Place Potentiometer

Place DIRect1A50v

Pay attention to the orientation of the diode

The white line marks the negative side

Place DCMotor

Place SoilMoisture

The soil moisture sensor requires soldering, consider soldering wires instead of pins

Place MQ4

The pins order on the breakout might change, follow the pin labels rather than their order.

Place HCSR04

The placing of the HCSR04 should be as in the image, try straining it's pins, so it will face upwards

Place LogicLevelConverter

To place the LLC correctly, look at its pin labels

Place ESP8266

Place TNMOSFETFQP

Place Res10KO

Place LEDBlue

The bended leg in the schematics is the longer leg of the LED

Place Res100O

Place DHT22

Place Res10KO

Place LEDYellow

The bended leg in the schematics is the longer leg of the LED

Place Res220O

Place LEDGreen

The bended leg in the schematics is the longer leg of the LED

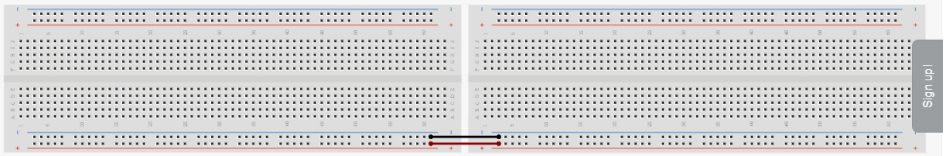
Place Res330O

Place LEDRed

The bended leg in the schematics is the longer leg of the LED

Place Res220O

RESET



Sign Up

1 Connect ArduinoMega

ArduinoMega GND to Bus GND

ArduinoMega 5v to Bus POS

2 Connect PIRGeneric

PIRGeneric GND to Bus GND

PIRGeneric SIG to ArduinoMega 16

PIRGeneric VDD to Bus POS

3 Connect LCD16X2

LCD16X2 VO to Potentiometer Sig

LCD16X2 DB4 to ArduinoMega 10

LCD16X2 DB5 to ArduinoMega 11

LCD16X2 DB6 to ArduinoMega 12

LCD16X2 DB7 to ArduinoMega 13

LCD16X2 E to ArduinoMega 14

LCD16X2 K to Bus GND

LCD16X2 RS to ArduinoMega 15

LCD16X2 R_W to Bus GND

LCD16X2 VDD to Bus POS

LCD16X2 VSS to Bus GND

Connect Res220O

Res220O con0 to Bus POS

Connect Potentiometer

Potentiometer 0 to Bus GND

Potentiometer Vin to Bus POS

4 Connect DIRect1A50v

DIRect1A50v pos to TNMOSFETFQP D

DIRect1A50v neg to Battery9v pos

DIRect1A50v neg to ArduinoMega Vin

Connect DCMotor

DCMotor Coil1 to TNMOSFETFQP D

DCMotor Coil2 to DIRect1A50v neg

5 Connect SoilMoisture

SoilMoisture GND to Bus GND

SoilMoisture Sig to ArduinoMega A0

SoilMoisture Vin to Bus POS

6 Connect MQ4

MQ4 5V to Bus POS

MQ4 AOUT to ArduinoMega A10

MQ4 GND to Bus GND

7 Connect HCSR04

HCSR04 ECHO to ArduinoMega 8

HCSR04 GND to Bus GND

HCSR04 TRIG to ArduinoMega 9

HCSR04 VCC to Bus POS

8 Connect LogicLevelConverter

LogicLevelConverter LV to ArduinoMega 3.3v

LogicLevelConverter LV to ESP8266 CH_PD

LogicLevelConverter GND to Bus GND

LogicLevelConverter HV2 to ArduinoMega 19

LogicLevelConverter HV1 to ArduinoMega 18

LogicLevelConverter HV to Bus POS

Connect ESP8266

ESP8266 RXD to LogicLevelConverter LV1

ESP8266 TXD to LogicLevelConverter LV2

ESP8266 VCC to LogicLevelConverter LV

ESP8266 GND to Bus GND

9 Connect TNMOSFETFQP

TNMOSFETFQP G to Res10KO con1

TNMOSFETFQP G to ArduinoMega 2

TNMOSFETFQP S to Bus GND

10 Connect LEDBlue

LEDBlue Vin to ArduinoMega 3

Connect Res100O

Res100O con0 to Bus GND

11 Connect DHT22

DHT22 DATA to ArduinoMega 7

DHT22 VDD to Bus POS

DHT22 GND to Bus GND

Connect Res10KO

Res10KO con1 to Bus POS

12 Connect LEDYellow

LEDYellow Vin to ArduinoMega 6

Connect Res220O

Res220O con0 to Bus GND

13 Connect LEDGreen

LEDGreen Vin to ArduinoMega 4

Connect Res330O

Res330O con0 to Bus GND

14 Connect LEDRed

LEDRed Vin to ArduinoMega 5

Connect Res220O

Res220O con0 to Bus GND

15 Connect to Computer and Power Supply

- Connect your Arduino board to the computer using a USB cable.
- Make sure that your power supply is connected and working properly. (Batteries are charged, wall adapter connected to the wall)

16 Connect Battery9v

Battery9v neg to Bus GND

17 Connect USBPowerB

18 Upload Code

Please go to the 'Code' section, download the code and upload it to the controller. The code will show you how to operate each component, and also test your wiring.

19 Test PIRGeneric

1. Make sure the Arduino board is connected to computer via USB cable
2. Open Arduino IDE
3. Click Tools -> Serial Monitor

4. Follow instructions on the Serial Monitor
   Cover the PIR sensor & then remove the cover to see if it detects anything.
5. If nothing happens, please check the connections

✔ Test LCD16X2

1. Make sure the Arduino board is connected to computer via USB cable
2. Open Arduino IDE
3. Click Tools -> Serial Monitor
4. Follow instructions on the Serial Monitor
5. If nothing happens, please check the connections

✔ Test DCMotor

1. Make sure the Arduino board is connected to computer via USB cable
2. Open Arduino IDE
3. Click Tools -> Serial Monitor
4. Follow instructions on the Serial Monitor
5. If nothing happens, please check the connections

✔ Test SoilMoisture_5v

1. Make sure the Arduino board is connected to computer via USB cable
2. Open Arduino IDE
3. Click Tools -> Serial Monitor
4. Follow instructions on the Serial Monitor
   Touch both pads of the sensor with your finger, you should see the values changing
5. If nothing happens, please check the connections

✔ Test MQ4_5v

1. Make sure the Arduino board is connected to computer via USB cable
2. Open Arduino IDE
3. Click Tools -> Serial Monitor
4. Follow instructions on the Serial Monitor
5. If nothing happens, please check the connections

✔ Test HCSR04_5v

1. Make sure the Arduino board is connected to computer via USB cable
2. Open Arduino IDE
3. Click Tools -> Serial Monitor
4. Follow instructions on the Serial Monitor
   Try moving your hand in front of the sensor to see the values change
5. If nothing happens, please check the connections

✔ Test ESP8266_HardwareSerial5v

1. Make sure the Arduino board is connected to computer via USB cable
2. Open Arduino IDE
3. Click Tools -> Serial Monitor
4. Follow instructions on the Serial Monitor
5. If nothing happens, please check the connections

✔ Test LEDBlue_5v

1. Make sure the Arduino board is connected to computer via USB cable
2. Open Arduino IDE

3. Click Tools -> Serial Monitor
4. Follow instructions on the Serial Monitor
5. If nothing happens, please check the connections

✔ Test DHT22_5v

1. Make sure the Arduino board is connected to computer via USB cable
2. Open Arduino IDE
3. Click Tools -> Serial Monitor
4. Follow instructions on the Serial Monitor
   blow air on the sensor to see its readings change
5. If nothing happens, please check the connections

✔ Test LEDYellow_5v

1. Make sure the Arduino board is connected to computer via USB cable
2. Open Arduino IDE
3. Click Tools -> Serial Monitor
4. Follow instructions on the Serial Monitor
5. If nothing happens, please check the connections

✔ Test LEDGreen_5v

1. Make sure the Arduino board is connected to computer via USB cable
2. Open Arduino IDE
3. Click Tools -> Serial Monitor
4. Follow instructions on the Serial Monitor
5. If nothing happens, please check the connections

✔ Test LEDRed_5v

1. Make sure the Arduino board is connected to computer via USB cable
2. Open Arduino IDE
3. Click Tools -> Serial Monitor
4. Follow instructions on the Serial Monitor
5. If nothing happens, please check the connections

20 ✔ Well done!

Congratulations! you've finished your circuito project. It's time to share your creation with the world.