

Circuit design Terrific Amur-Hango

tinkercad.com/things/4DVeixYuEXT-terrific-amur-hango/editel?tenant=circuits

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Terrific Amur-Hango

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Code Start Simulation Send To

The diagram illustrates a Tinkercad circuit project titled "Terrific Amur-Hango". The central component is an Arduino Uno microcontroller board. It is connected to a breadboard which contains a 555 timer IC, several resistors, and jumper wires. A DC motor is connected to the breadboard circuit. A green sensor module is also connected to the Arduino. A small LCD display is connected to the breadboard. The circuit is powered by a USB Type-C cable plugged into the Arduino. The background shows the Tinkercad web interface with various toolbars and a status bar at the bottom indicating the system time and weather.

# CODE:

```
#include<Servo.h>
const int pingPin = 7;
int servoPin = 8;

servo servo1;

void setup() {
  // initialize serial communication:
  Serial.begin(9600);
  servo1.attach(servoPin);
  pinMode(2,INPUT);
  pinMode(4,OUTPUT);
  pinMode(11,OUTPUT);
  pinMode(12,OUTPUT);
  pinMode(13,OUTPUT);
  pinMode(A0,INPUT);
  digitalWrite(2,LOW);
  digitalWrite(11,HIGH);
}

void loop() {

  long duration, inches, cm;

  pinMode(pingPin, OUTPUT);
  digitalWrite(pingPin, LOW);
  delayMicroseconds(2);
  digitalWrite(pingPin, HIGH);
  delayMicroseconds(5);
  digitalWrite(pingPin, LOW);

  pinMode(pingPin, INPUT);
  duration = pulseIn(pingPin, HIGH);

  // convert the time into a distance
  inches = microsecondsToInches(duration);
  cm = microsecondsToCentimeters(duration);
```

```
Serial.print(inches);  
Serial.print("in, ");  
Serial.print(cm);  
Serial.print("cm");  
Serial.println();  
delay(100);
```

```
servo1.write(0);
```

```
if(cm < 40)  
{  
    servo1.write(90);  
    delay(2000);  
}  
else  
{  
    servo1.write(0);  
}
```

```
int pir = digitalRead(2);
```

```
if(pir == HIGH)  
{  
    digitalWrite(4,HIGH);  
    delay(1000);  
}  
else if(pir == LOW)  
{  
    digitalWrite(4,LOW);  
}
```

```
float value=analogRead(A0);  
float temperature=value*0.48;
```

```
Serial.println("Temperature");  
Serial.println(temperature);
```

```
if(temperature > 20)  
{  
    digitalWrite(12,HIGH);  
    digitalWrite(13,LOW);  
}
```

```
    }  
    else  
    {  
        digitalWrite(12,LOW);  
        digitalWrite(13,LOW);  
    }  
}
```

```
long microsecondsToInches(long microseconds) {  
    return microseconds / 74 / 2;  
}
```

```
long microsecondsToCentimeters(long microseconds) {  
    return microseconds / 29 / 2;  
}
```

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Simulator time: 00:00:02.938

Code Stop Simulation Send To

The circuit diagram shows an Arduino Uno microcontroller board connected to a breadboard. The breadboard contains a motor, a buzzer, and a sensor. The connections are as follows: the motor's ground is connected to the Arduino's ground; the motor's positive terminal is connected to a digital pin on the Arduino; the buzzer's ground is connected to the Arduino's ground; the buzzer's positive terminal is connected to a digital pin on the Arduino; the sensor's ground is connected to the Arduino's ground; the sensor's positive terminal is connected to a digital pin on the Arduino. The sensor is a green module with a white sensor head. The motor is a blue and black DC motor. The buzzer is a small blue component. The breadboard is populated with several integrated circuits and resistors, including a black integrated circuit and a yellow integrated circuit. The Arduino Uno is a blue board with a USB Type-C port and a USB Type-A port. The entire circuit is connected to a power source, represented by a black and red plug on the left.

30°C Mostly cloudy

Windows Taskbar

22:17 06-10-2022