

/*

Analog Input

Demonstrates analog input by reading an analog sensor on analog pin 0 and turning on and off a light emitting diode(LED) connected to digital pin 13.

The amount of time the LED will be on and off depends on the value obtained by analogRead().

The circuit:

- * Potentiometer attached to analog input 0
- * center pin of the potentiometer to the analog pin
- * one side pin (either one) to ground
- * the other side pin to +5V
- * LED anode (long leg) attached to digital output 13
- * LED cathode (short leg) attached to ground

* Note: because most Arduinos have a built-in LED attached to pin 13 on the board, the LED is optional.

Created by David Cuartielles

modified 30 Aug 2011

By Tom Igoe

This example code is in the public domain.

<http://www.arduino.cc/en/Tutorial/AnalogInput>

*/

```
int sensorPin = A0; // select the input pin for the potentiometer
```

```
int threshold = 300; // threshold for turning the lamp on
```

```
const int ledPin = 13; // select the pin for the LED
```

```
int sensorValue = 0; // variable to store the value coming from the sensor
```

```
void setup() {  
  Serial.begin(9600);  
  // declare the ledPin as an OUTPUT:  
  pinMode(ledPin, OUTPUT);  
}
```

```
void loop() {  
  // read the value from the sensor:  
  sensorValue = analogRead(sensorPin);
```

```
Serial.println(sensorValue);

if (sensorValue > threshold) {
  // turn the LED on
  digitalWrite(ledPin, HIGH);
}
// if it's lower than the threshold
else {
  // turn the LED off
  digitalWrite(ledPin, LOW);
}

delay(50);
}
```