

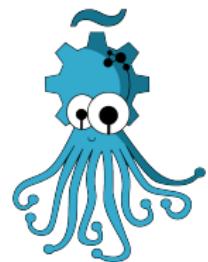
SODAR: Iniciación a Arduino + Processing

Un taller BricoLabs

ctemes eukelade Milo salvati

Asociación BricoLabs

7 noviembre / OSHWDem - 2014



Agenda

1 Presentación

- ¿Quienes somos?
- Requisitos

2 Arduino

- Intro
- Montaje
- Movimiento
- Sensor

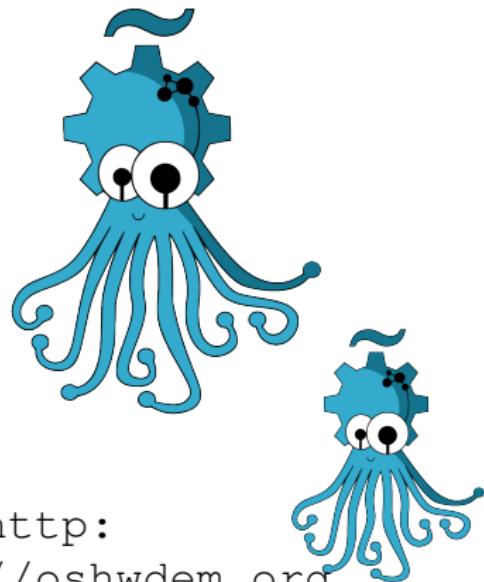


BricoLabs y la OSHWDem



BricoLabs

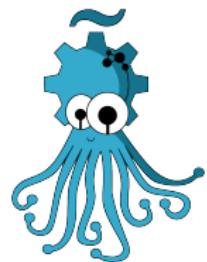
<http://bricolabs.cc/>



<http://oshwdem.org>

Ponentes

- @ctemes
- Eukelade @pepdiz
- Milo
- @salvari

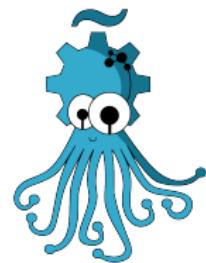
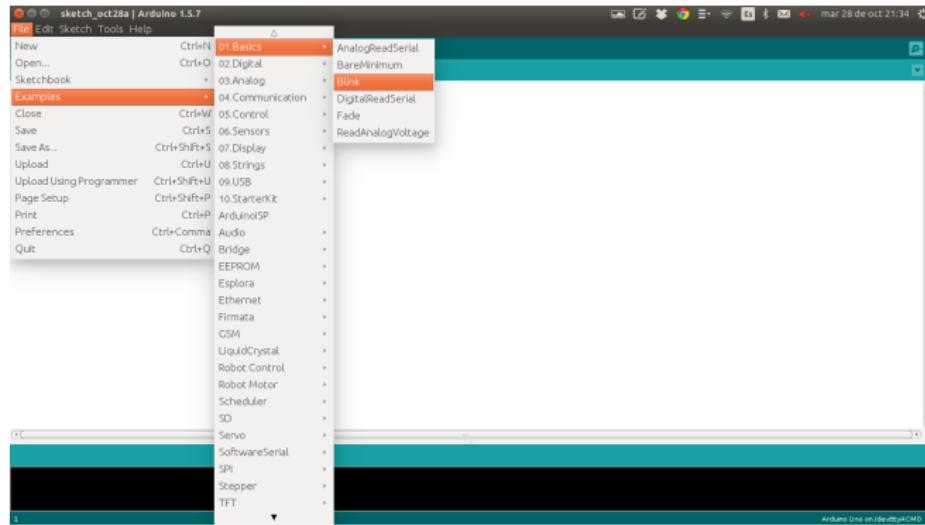


Asistentes

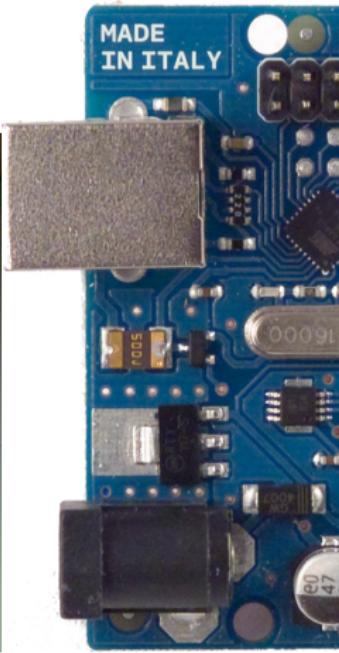
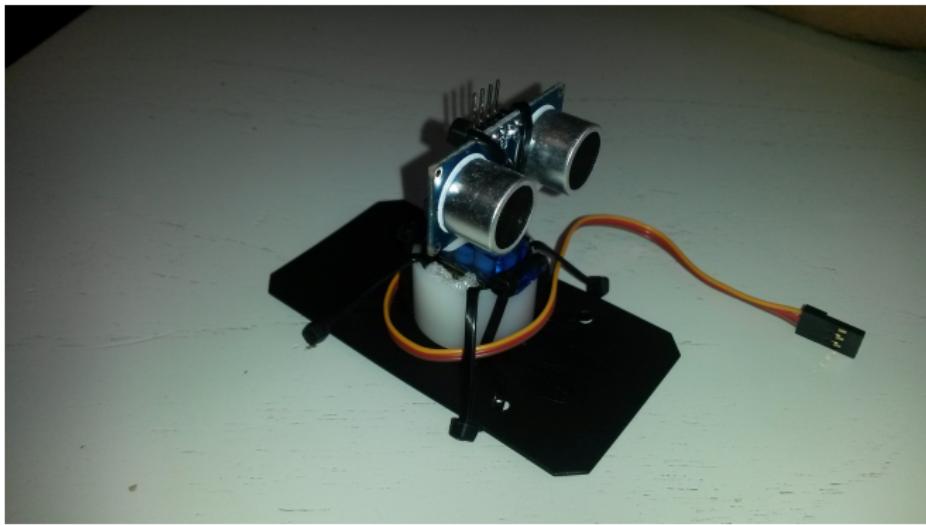
- ¿Quién conoce el Arduino?
- ¿Quién conoce Processing?
- ¿Traéis los deberes hechos? ;)



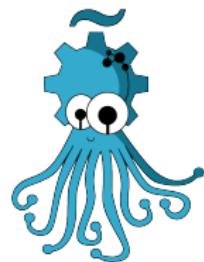
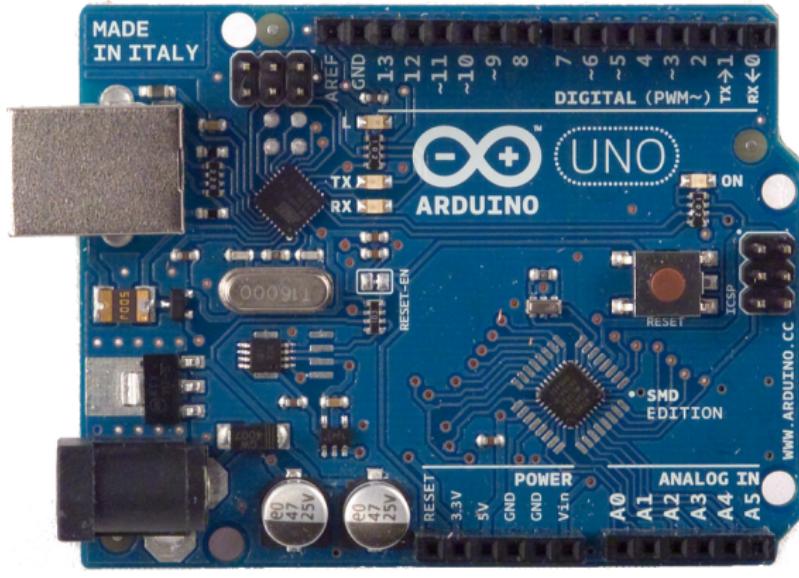
Revisar la instalación



SODAR



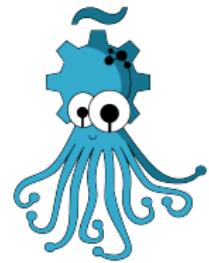
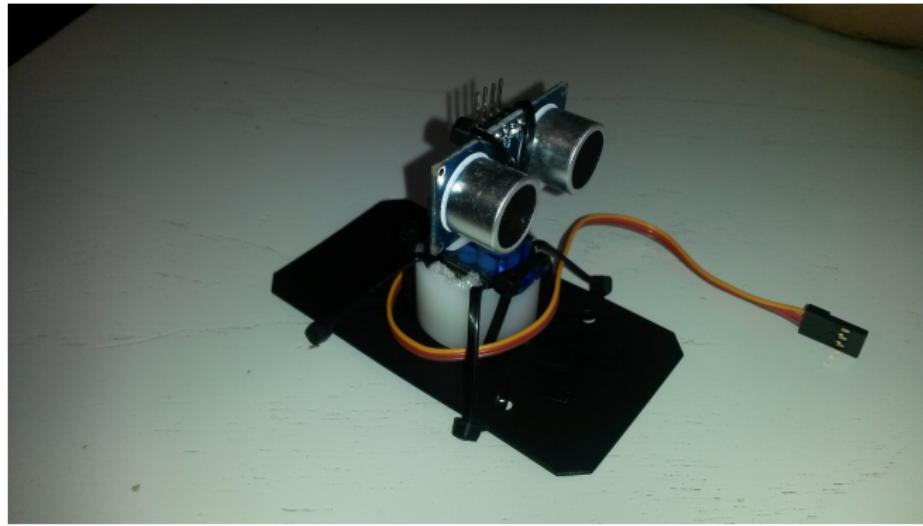
Arduino



Página Principal

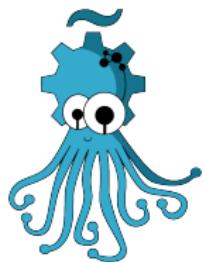
Foto Familia

Montaje I



Montaje II

Esquema Fritzing



Estructura de un programa Arduino

```
#include <Servo.h>

#define SERVO_PWM_PIN 9

Servo myservo;

/*
  setup
  Se ejecuta una sola vez al principio del programa. O cuando el arduino
  se resetea.
*/
void setup() {

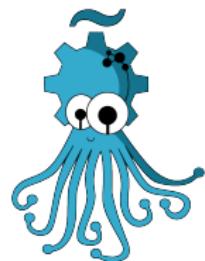
}

/*
  loop
  Se ejecuta siempre, hasta el fin de los tiempos :-)
*/
void loop() {

}
```



Servo

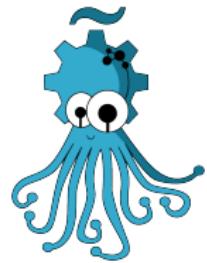


#include <Servo.h>

ctemes, eukelade, milo, salvari

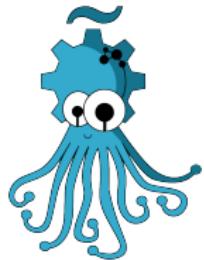
Taller SODAR

Barridos

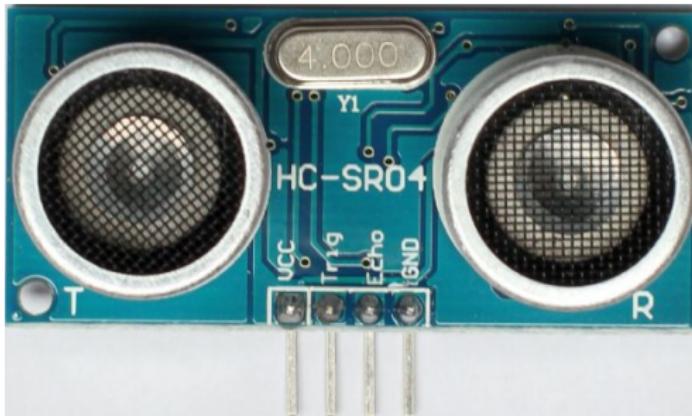


Una solución

- Definimos un paso
- Controlamos el ángulo
- Usamos el propio loop del Arduino



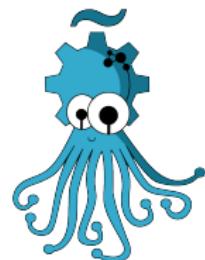
Sensor ultrasonidos



Sensor de distancia HC-SR04

Electric Parameter

Working Voltage	DC 5 V
Working Current	15mA
Working Frequency	40Hz
Max Range	4m
Min Range	2cm



Protocolo

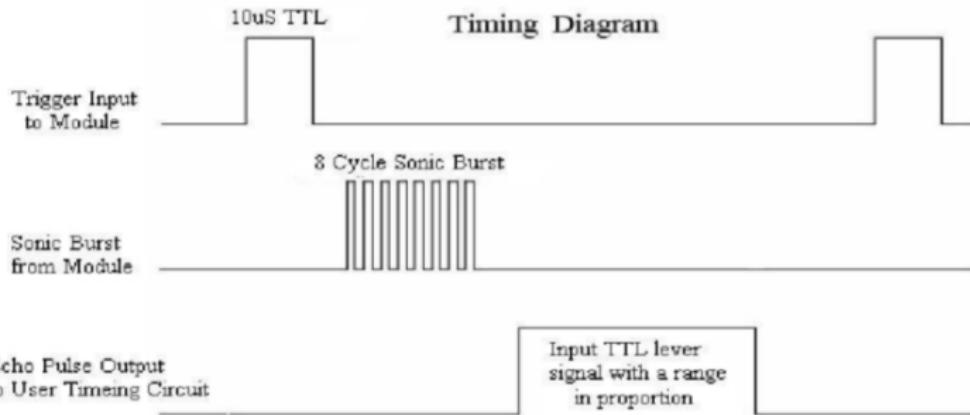


Diagrama de señales

