

# Recursos Tecnológicos.

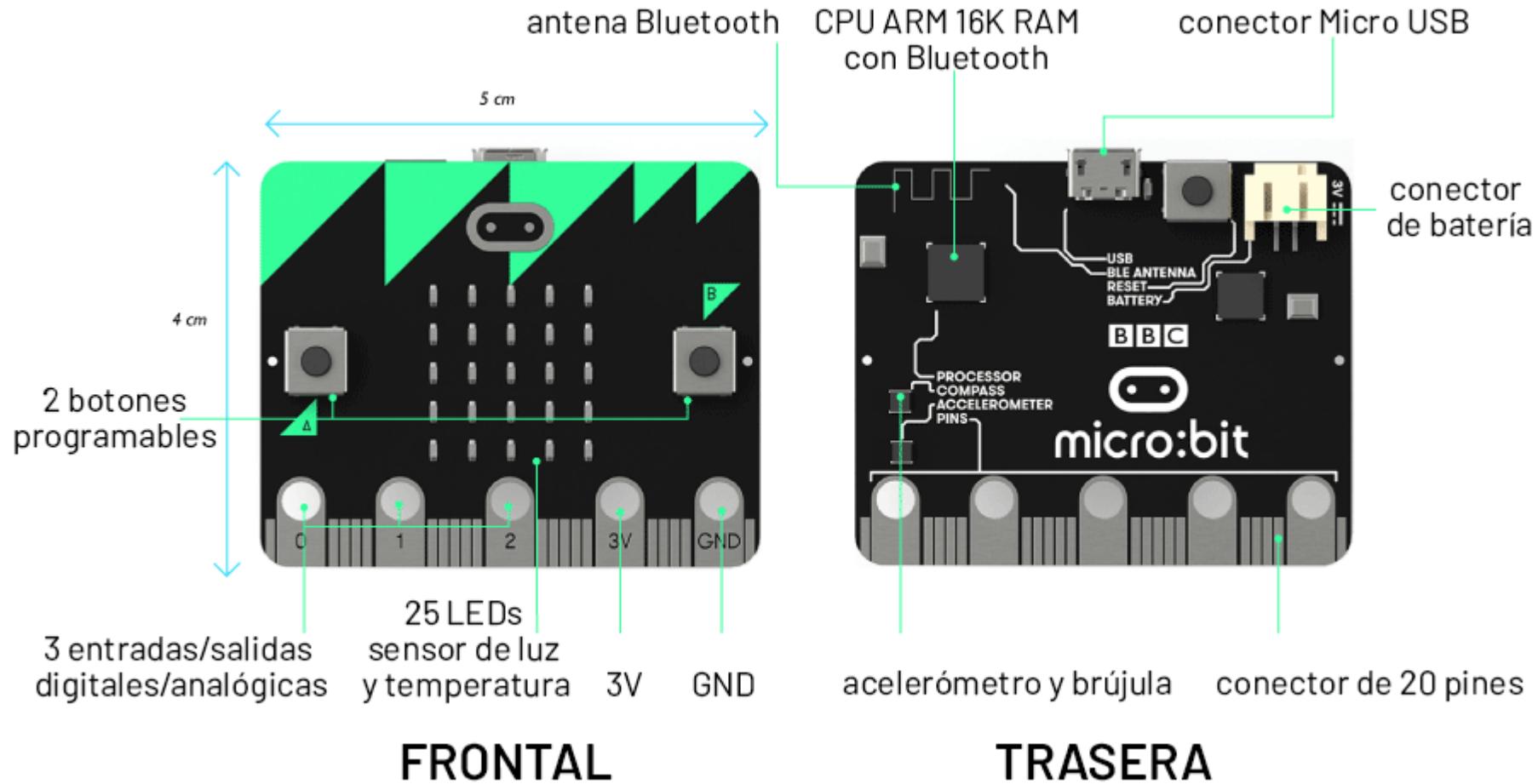
## Robótica Educativa



RED ANDALUZA  
DE ROBÓTICA  
Y TECNOLOGÍA  
EDUCATIVA

**Granada, octubre 2018**

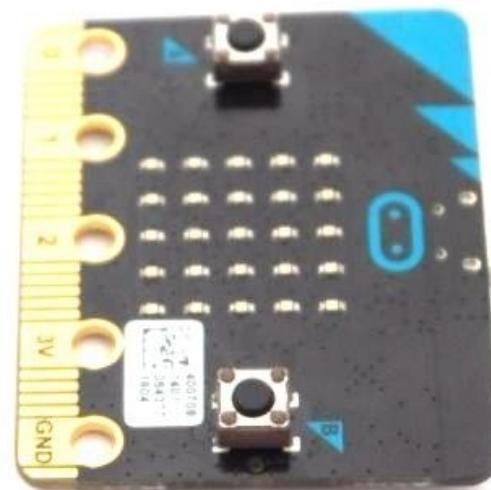
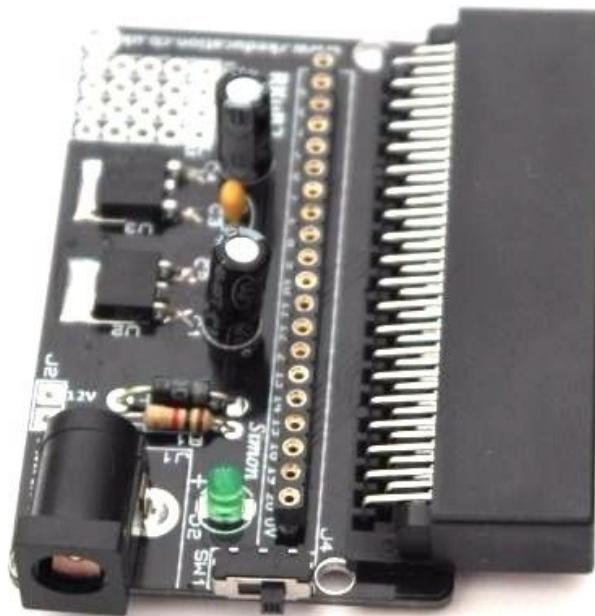
# Micro:bit



<http://www.microes.org/>

<https://www.microbit.org/es/>

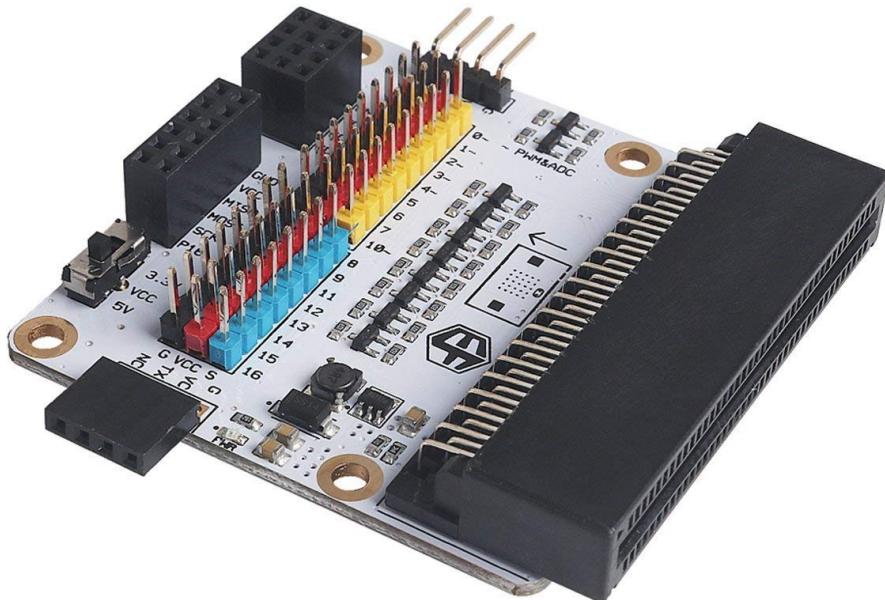
# Micro:bit



# Micro:bit

Micro:bit Breakout Board can completely match with BBC Micro:bit pins.

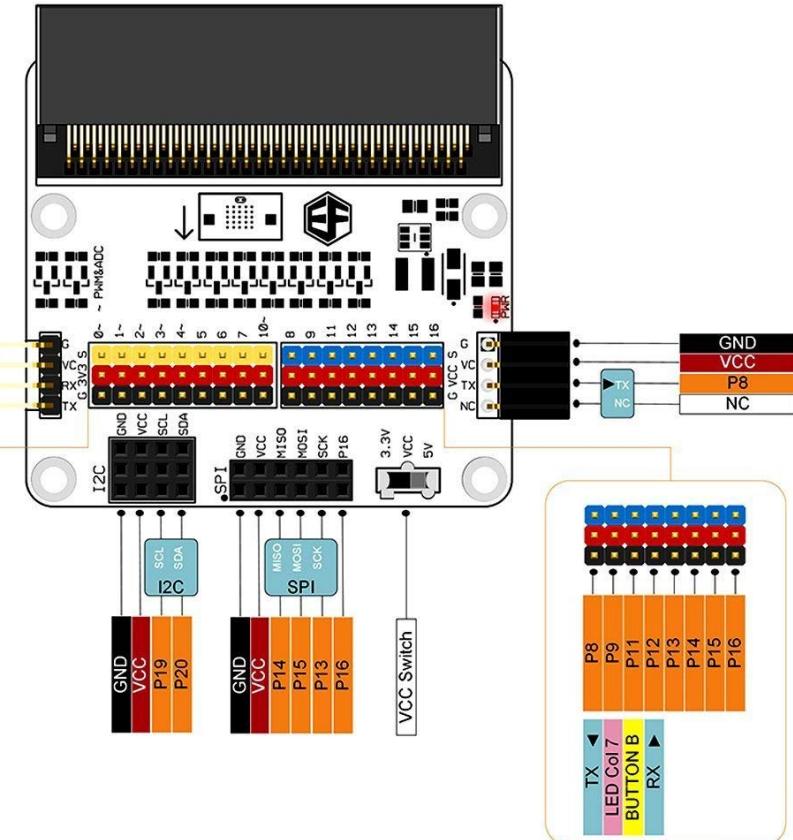
Plug our breakout board into BBC Micro:bit,  
you will find it is much more convenient to lead



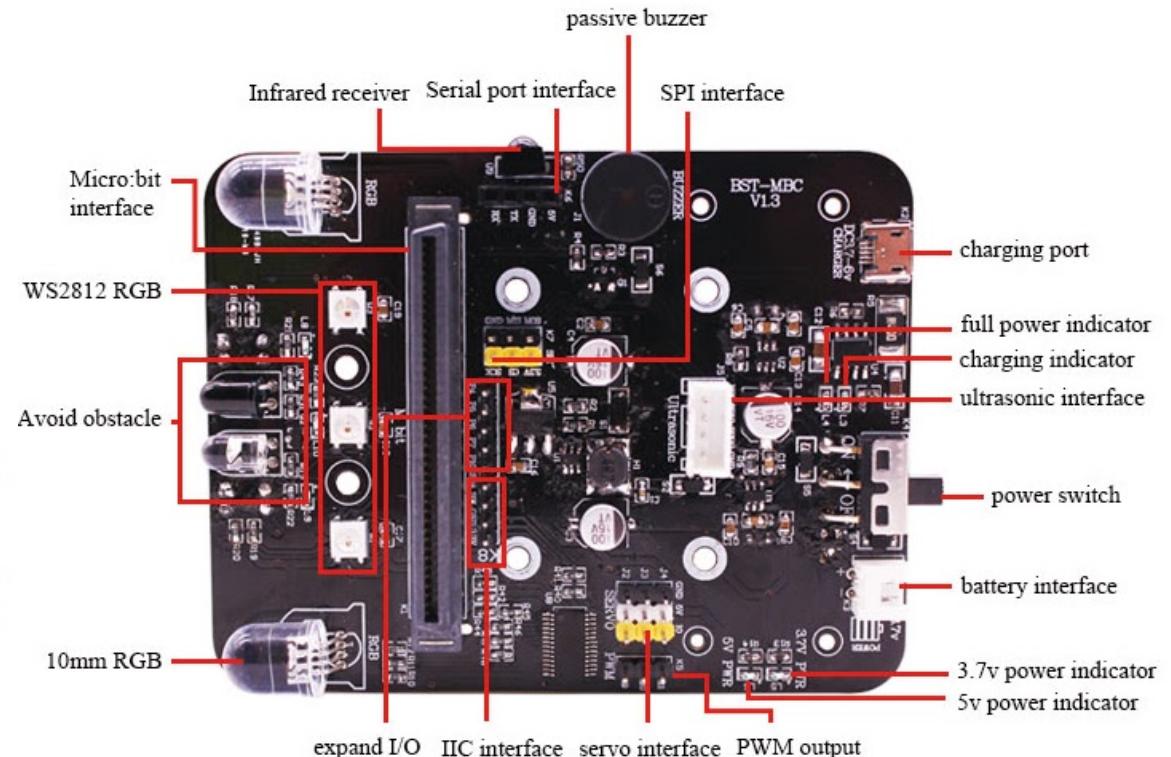
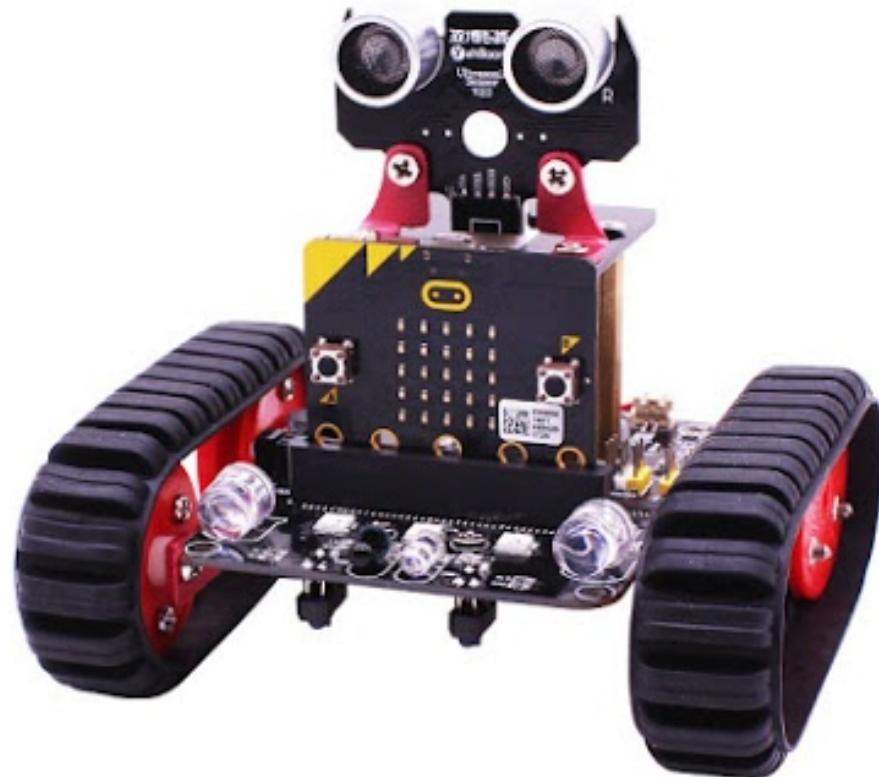
ELECFREAKS OCTOPUS:BIT V1.6

GND
POWER
BUTTON
DIGITAL
ANALOG IN
LED COL
SERIAL
OUTPUT

GND
VCC
P12
P8
RX
TX



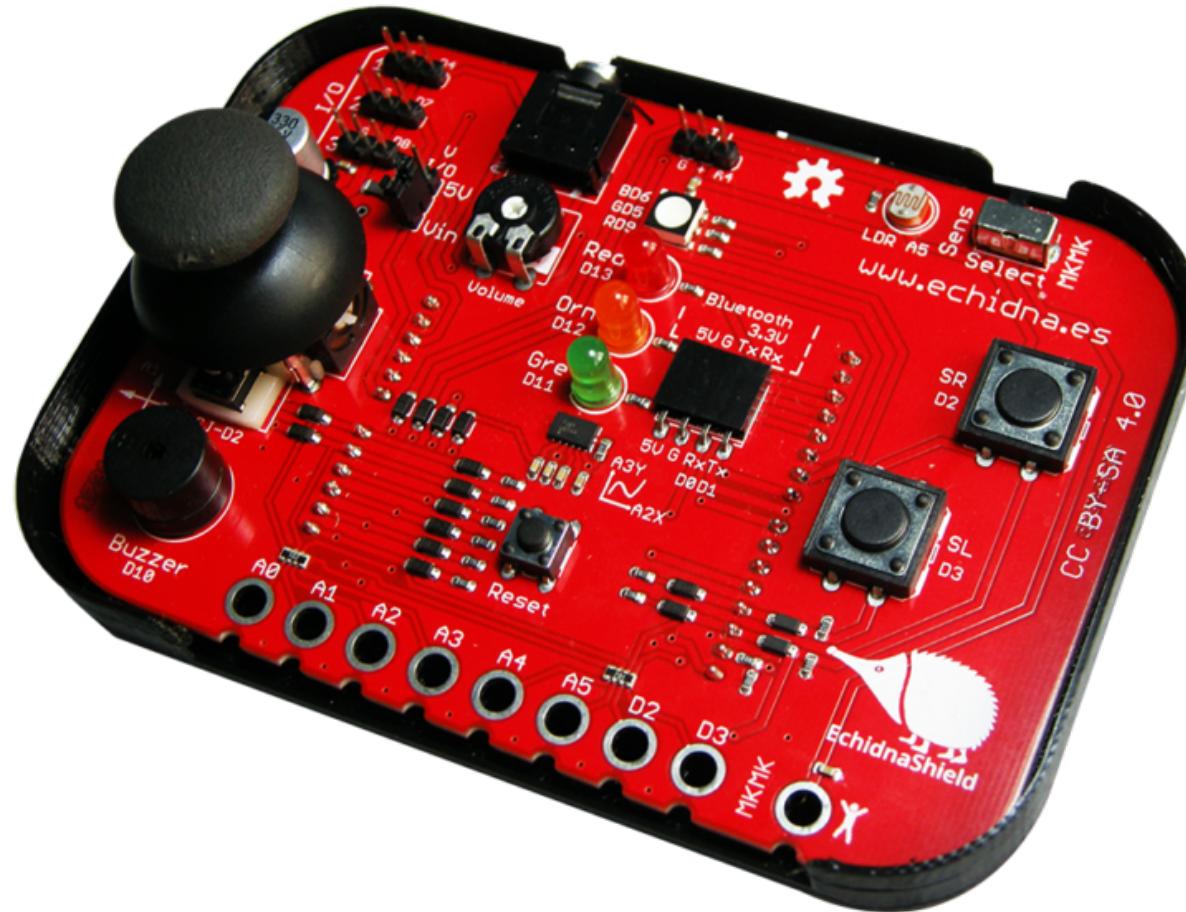
# Micro:bit



<https://soporte.microes.org/mictotank>

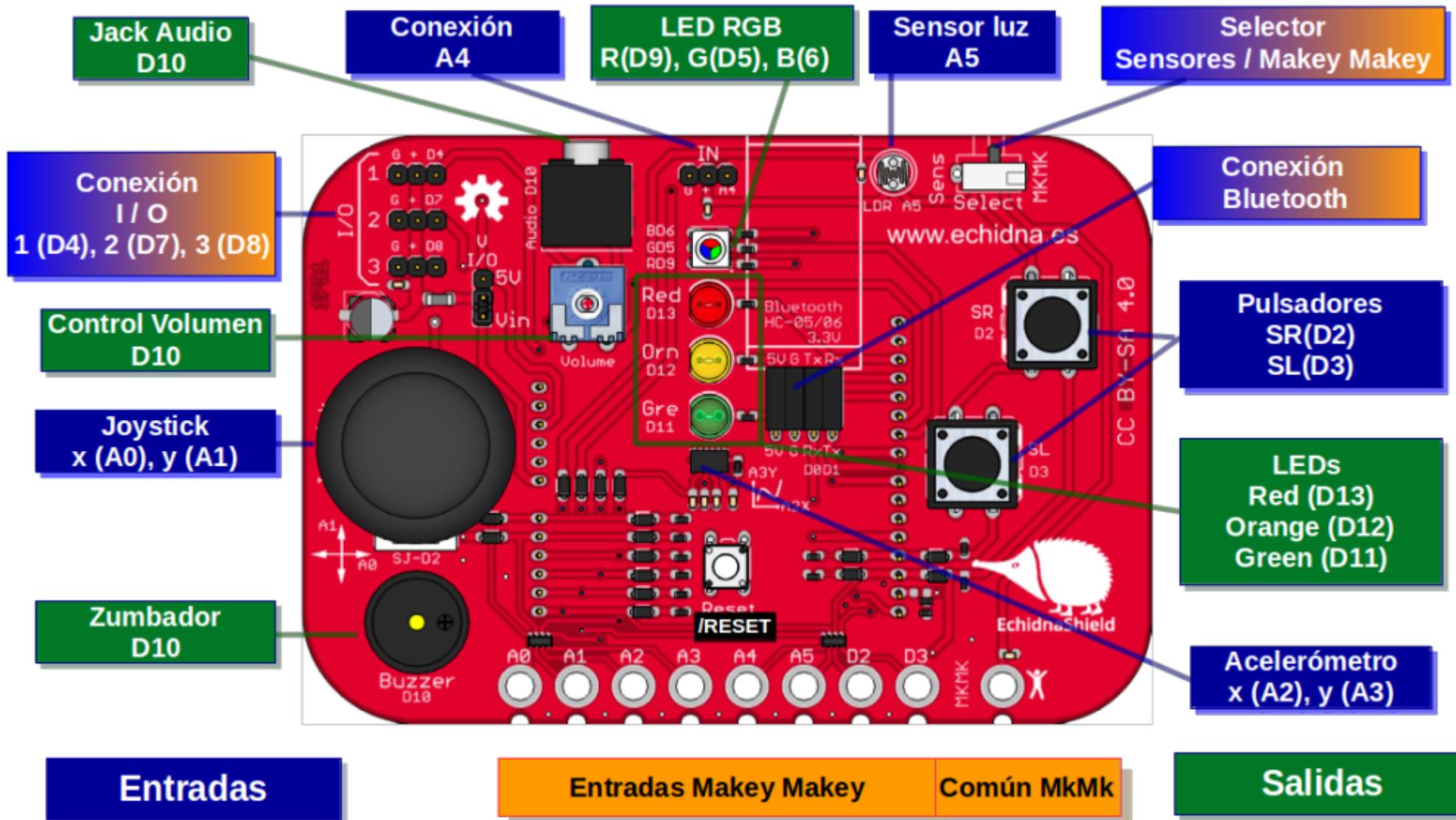
<http://www.yahboom.net/study/Bitbot>

# EchidnaShield



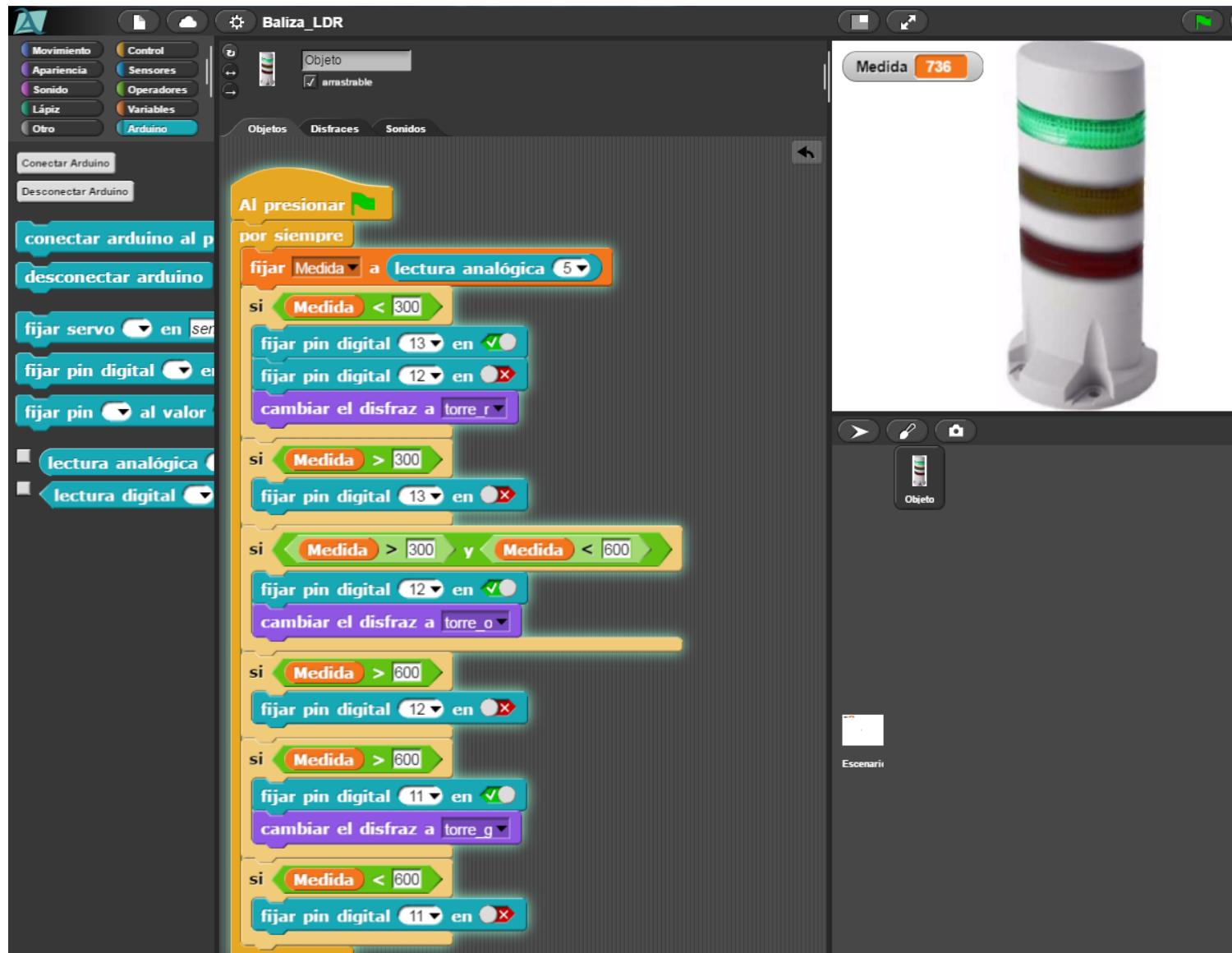
<http://echidna.es/>

# EchidnaShield



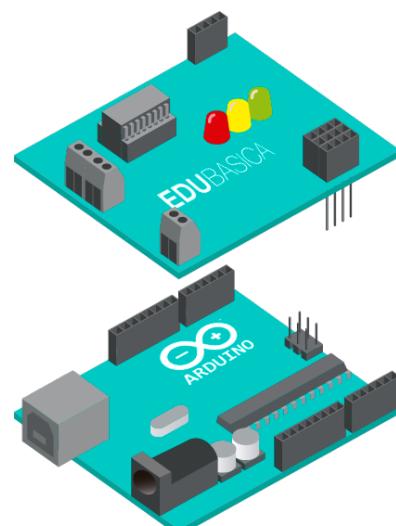
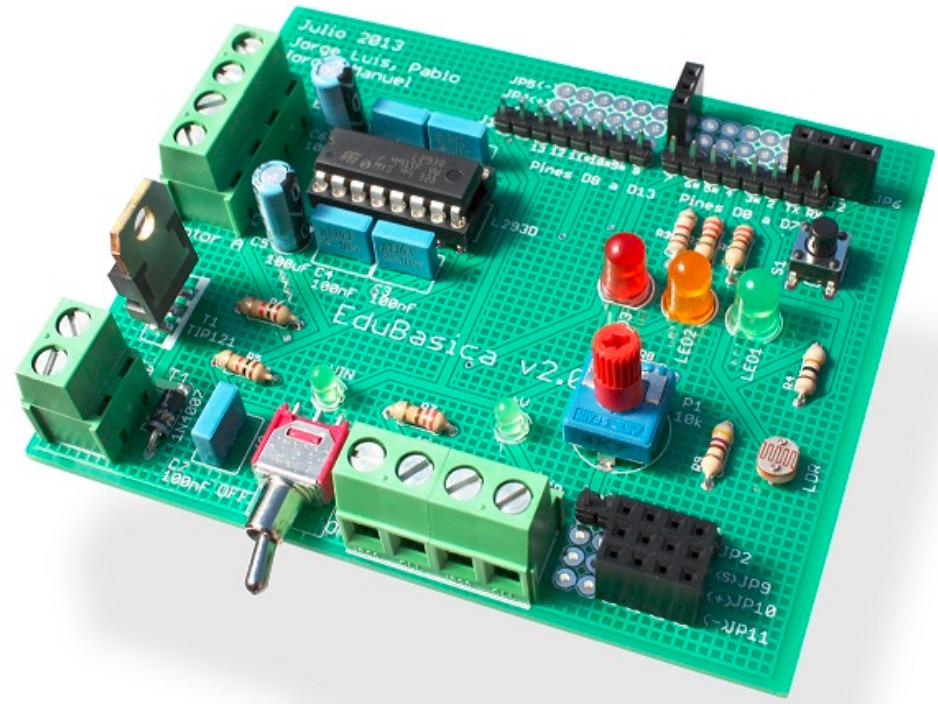
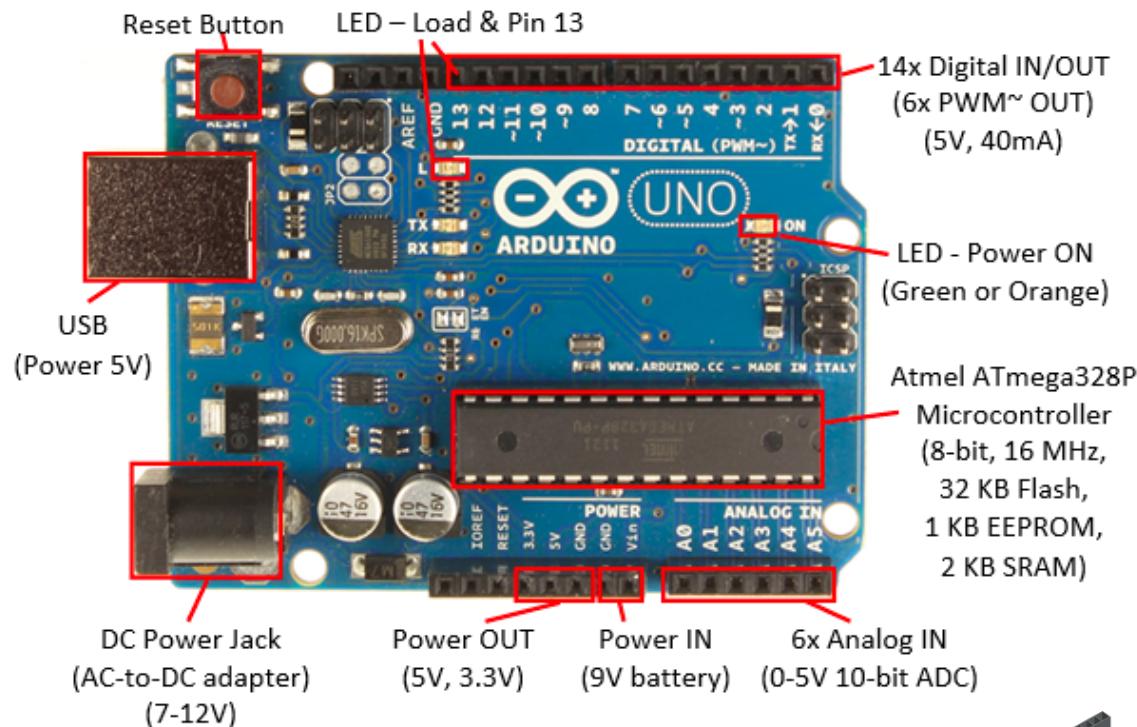
<http://echidna.es/actividades/>

# EchidnaShield



<http://snap4arduino.rocks/index.html>

# EduBasica



# EduBasica v2.0

(rev. Nov/2013)



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**Motor cc (B)**  
Dirección 1: PIN D12  
Dirección 2: PIN D13  
Velocidad: PIN D11

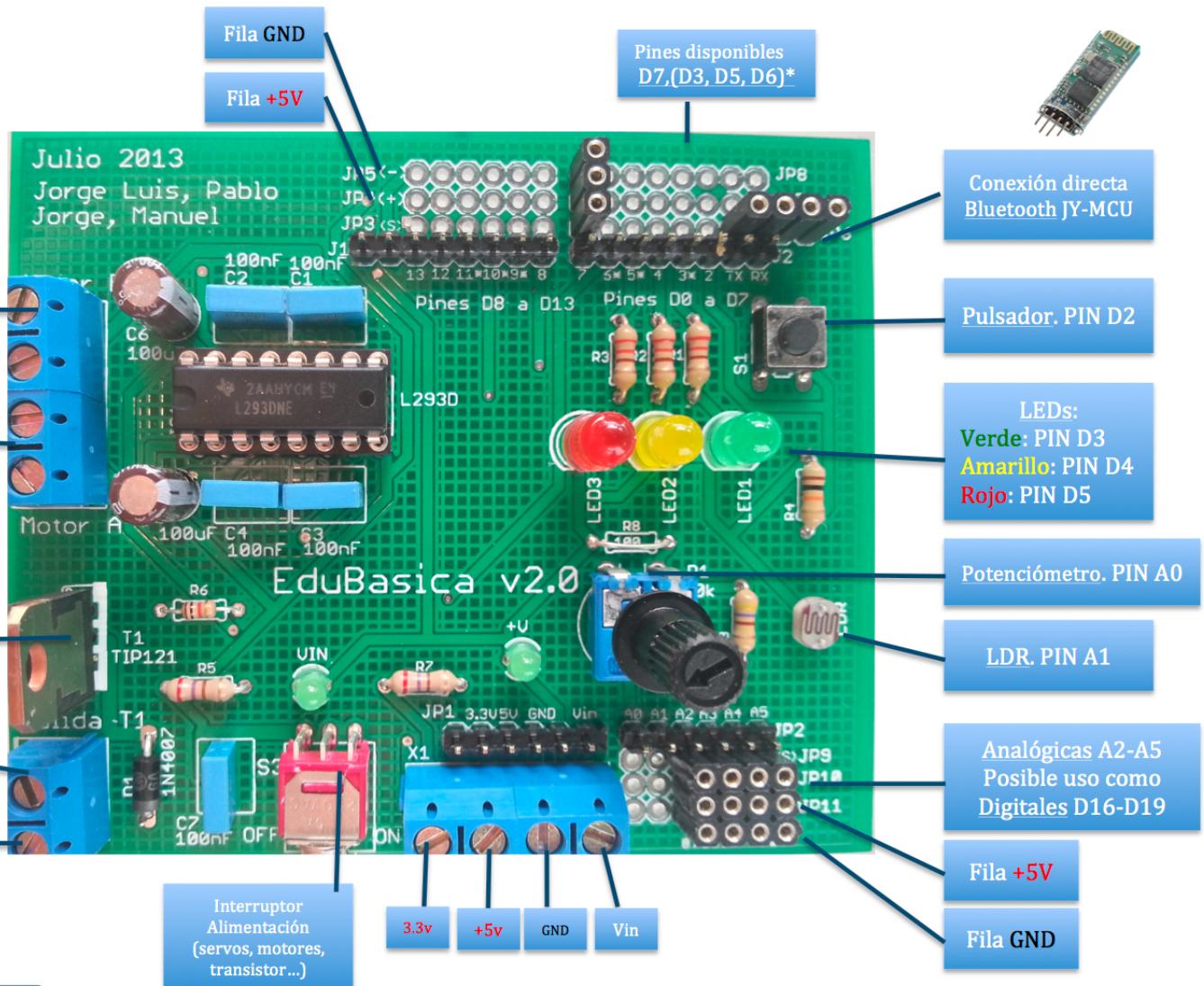
**Motor cc (A)**  
Dirección 1: PIN D8  
Dirección 2: PIN D9  
Velocidad: PIN D10

**Transistor (Base)**  
PIN D6

**Salida Transistor  
(Colector)**

**Vin**

**Interruptor  
Alimentación  
(servos, motores,  
transistor...)**



\*Usar esos pines anulan el transistor, y los LEDs



[www.practicasconarduino.com/](http://www.practicasconarduino.com/)

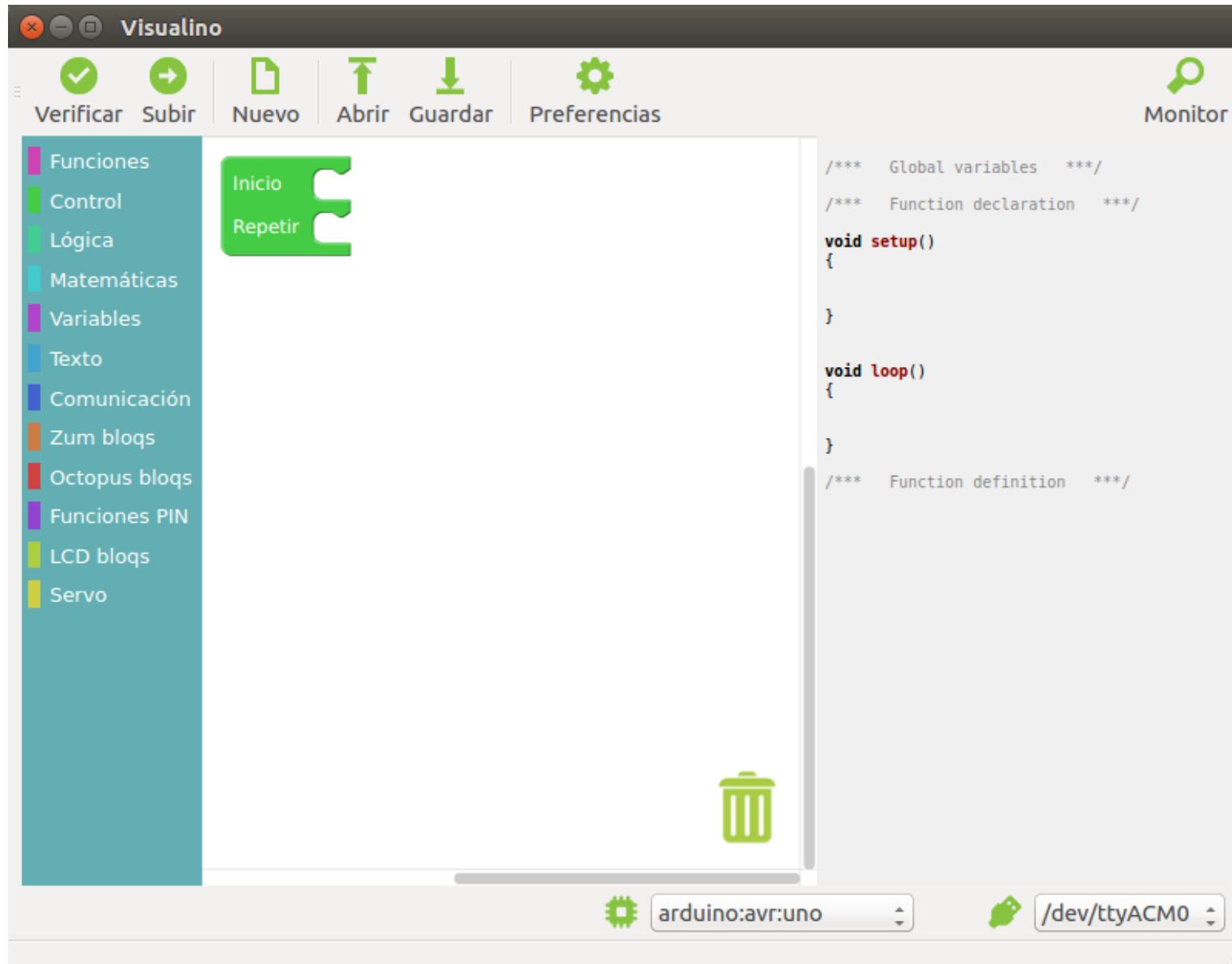
Repositorio de EduBasica  
<https://edubasica.github.io/>

Video montaje EduBasica  
<https://www.youtube.com/watch?v=OG5RQnMbqs8>

Contacto  
[practicasconarduino@gmail.com](mailto:practicasconarduino@gmail.com)

# Prog. Obj. Tecnológicos

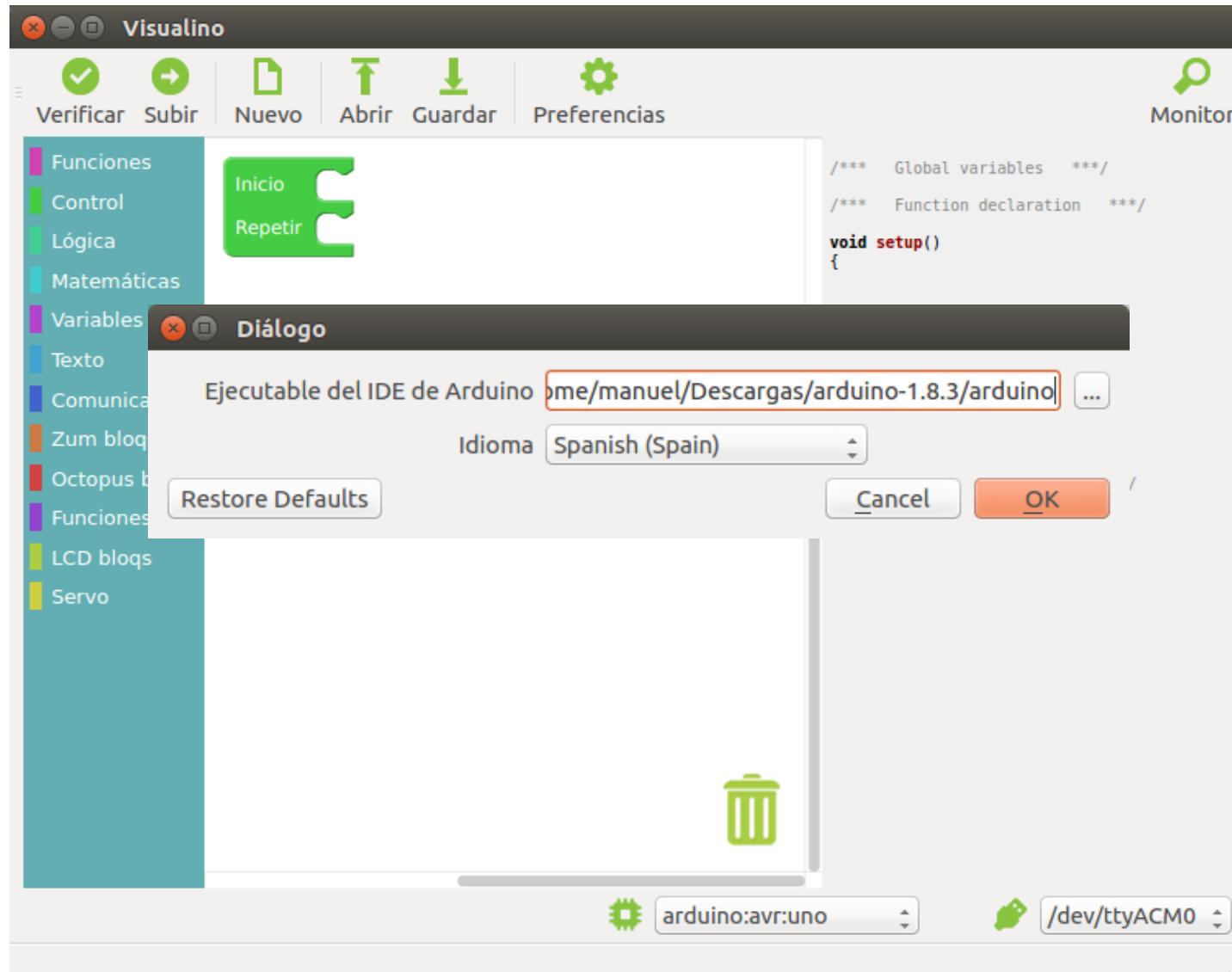
Entorno de programación visual: Visualino (<http://visualino.net/>)



# Prog. Obj. Tecnológicos

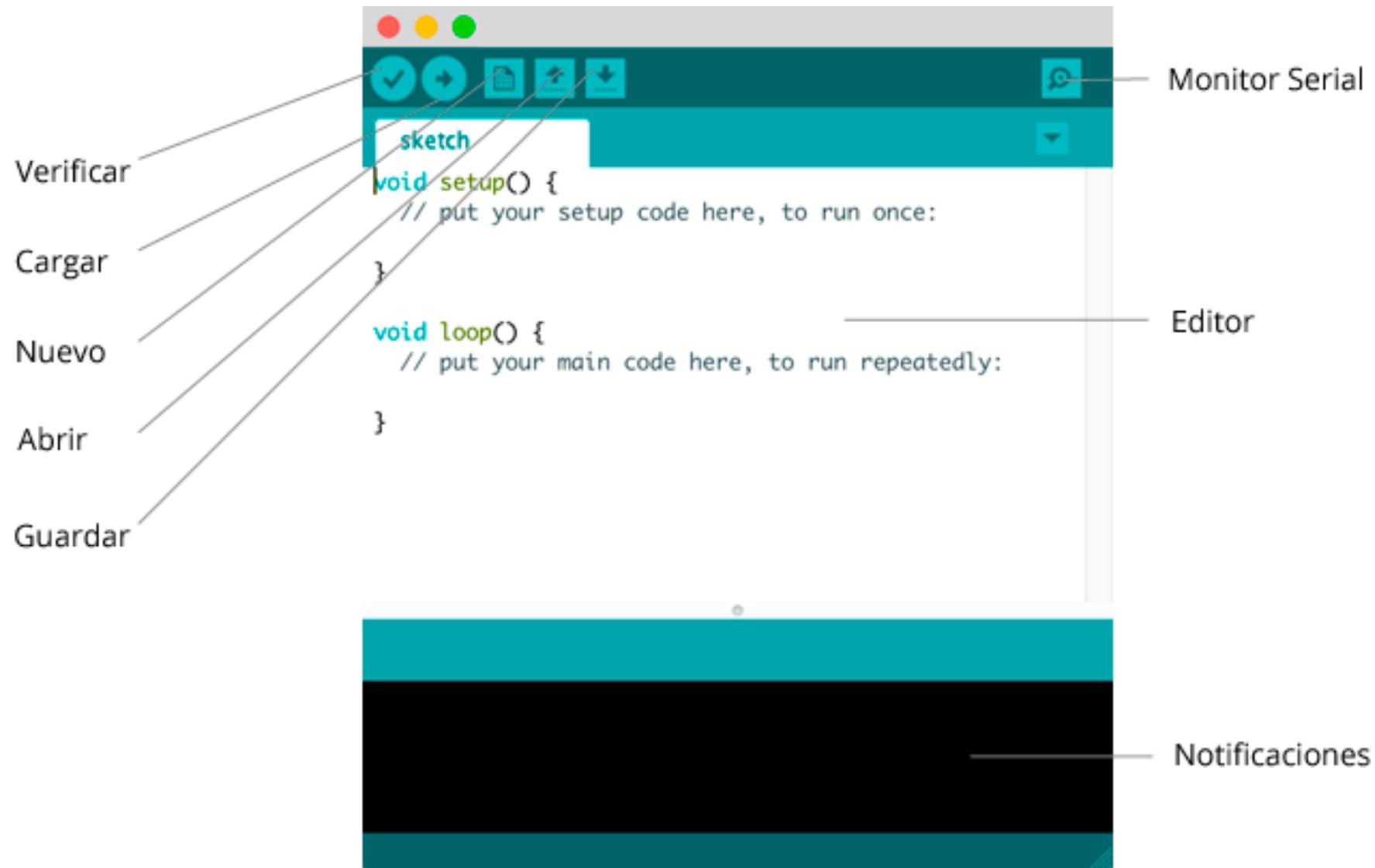
Entorno de programación visual: Visualino (<http://visualino.net/>)

IMPORTANTE: indicar el path del ejecutable de Arduino en la opción de Preferencias.



# Prog. Obj. Tecnológicos

## Entorno de programación (IDE)



# Prog. Obj. Tecnológicos

## Estructura de programa

Knob

```
// Controlling a servo position using a potentiometer (variable resistor)
// by Michal Rinott <http://people.interaction-ivrea.it/m.rinott>
```

Descripción del programa

```
#include <Servo.h>

Servo myservo; // create servo object to control a servo

int potpin = 0; // analog pin used to connect the potentiometer
int val; // variable to read the value from the analog pin
```

Módulos y declaración de variables

```
void setup()
{
    myservo.attach(9); // attaches the servo on pin 9 to the servo object
}
```

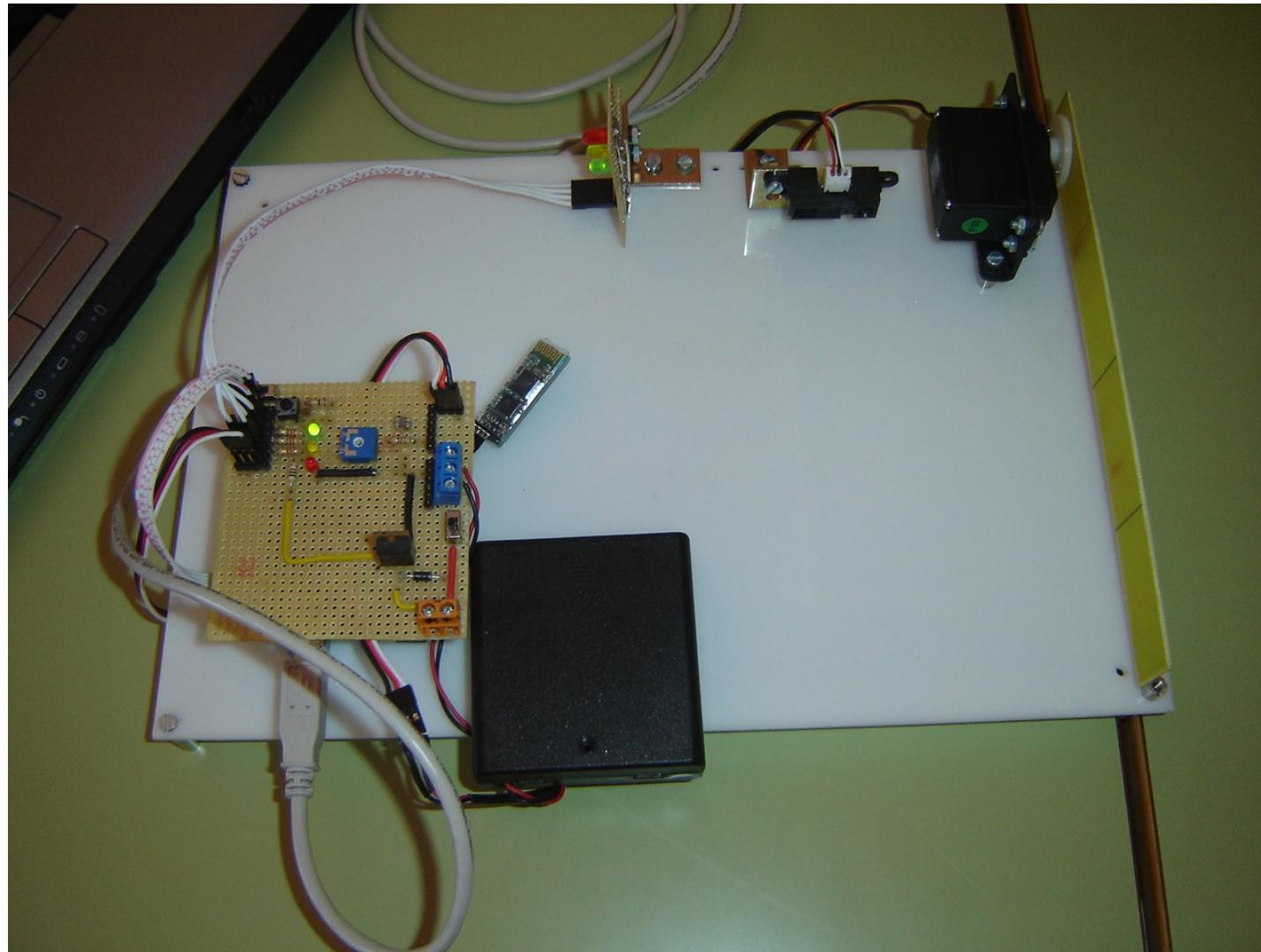
Bloque de configuración

```
void loop()
{
    val = analogRead(potpin);
    val = map(val, 0, 1023, 0, 179);
    myservo.write(val);
    delay(15);
}
```

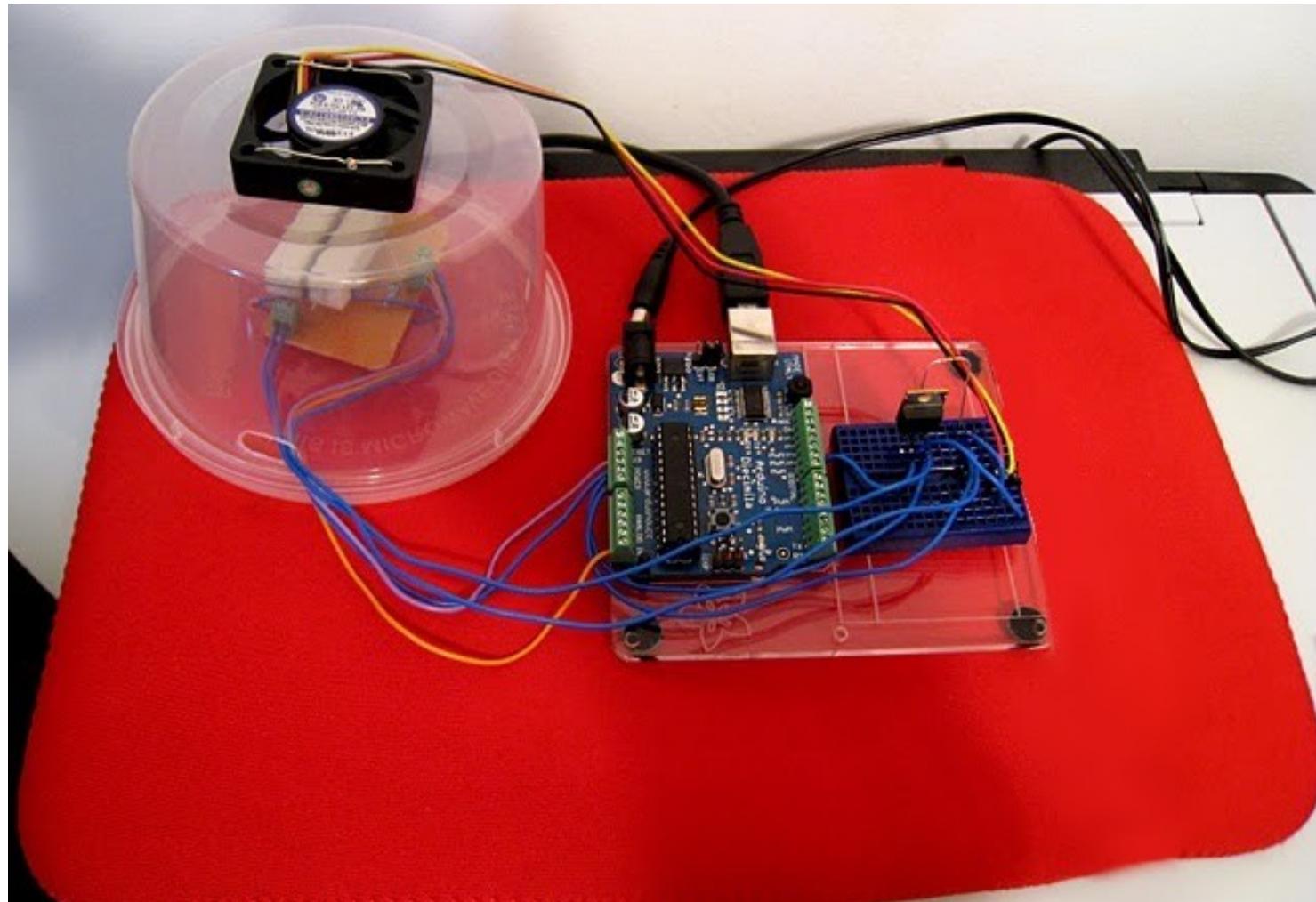
Bloque de ejecución continua

```
// reads the value of the potentiometer (value between 0 and 1023)
// scale it to use it with the servo (value between 0 and 180)
// sets the servo position according to the scaled value
// waits for the servo to get there
```

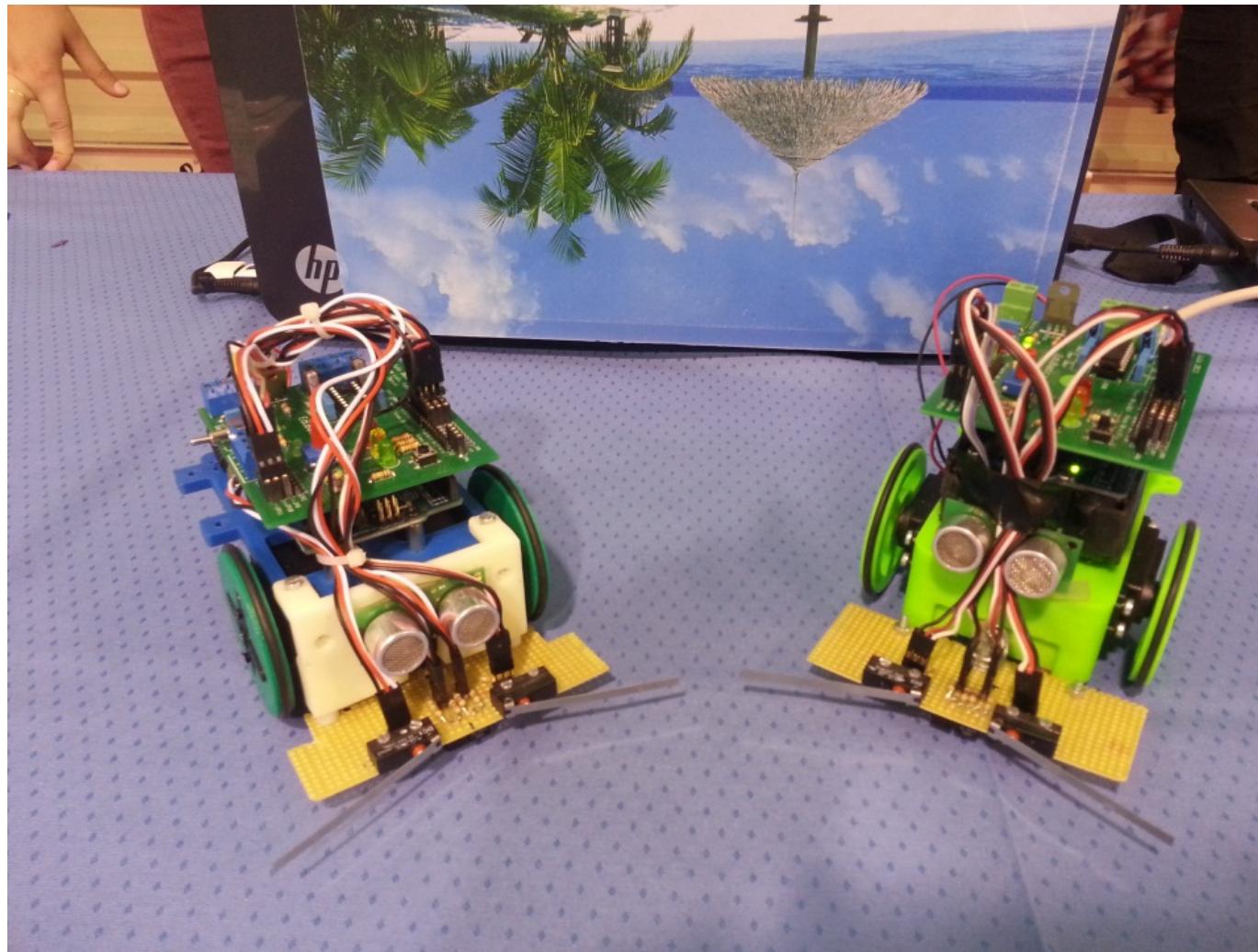
# Prog. Obj. Tecnológicos



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<http://roboticaytecnologia.org/>



**MUCHAS GRACIAS**

Ponente:

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