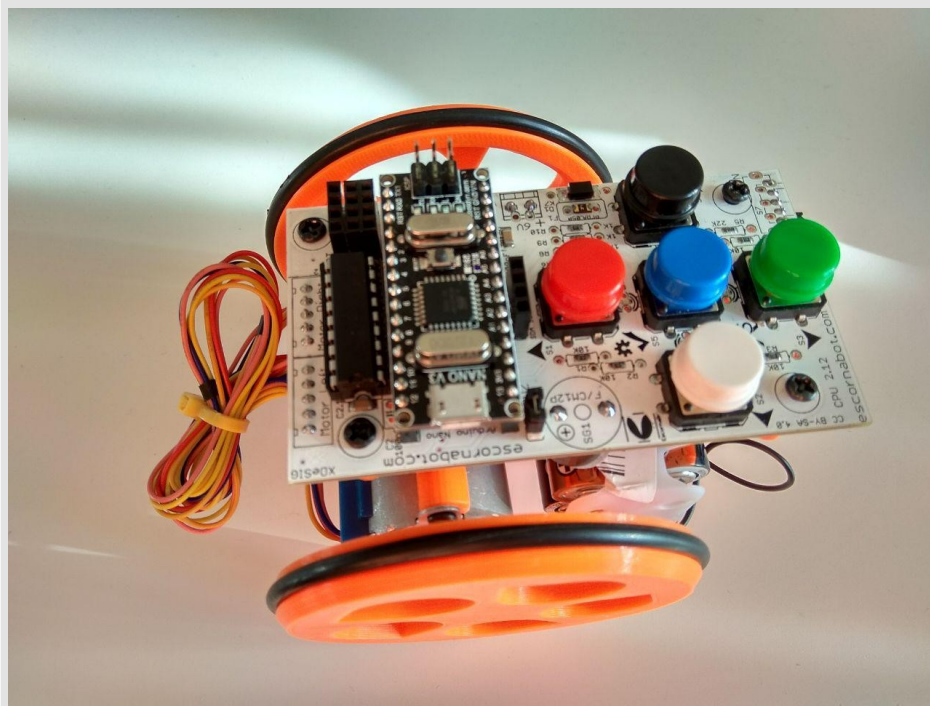


# Taller Escornabot DIY

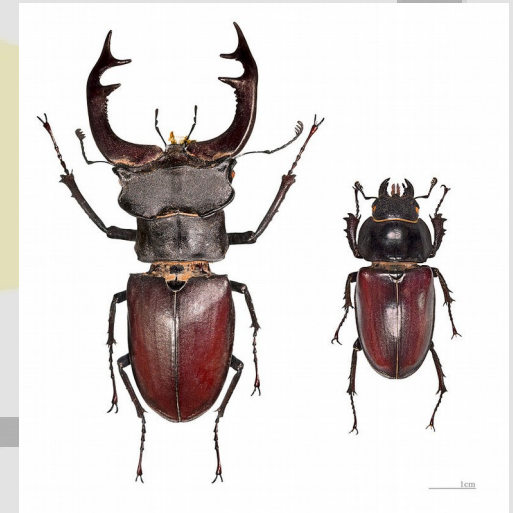
Club Robótica Granada



# ¿Escorna que ...?



ESCORNABOI  
(escarabajo  
lucanus cervus en  
galego) + BOT  
(robot)



# Objetivo

## ROBÓTICA Y PROGRAMACIÓN



**Sustituye a Robots privados**



# Características

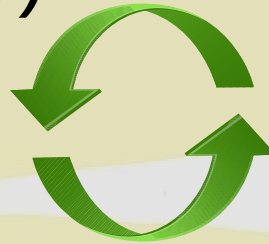
- Lo haces tú
- Hardware abierto y Software libre
- Asequible
- Bien documentado

# ¿Quién?

Equipo de desarrollo (Github

<https://github.com/orgs/escornabot/people/> /

Grupo de google)



Comunidad (Grupo de google /  
Telegram)

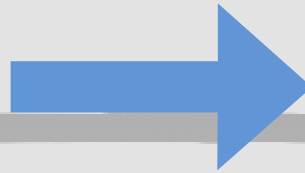
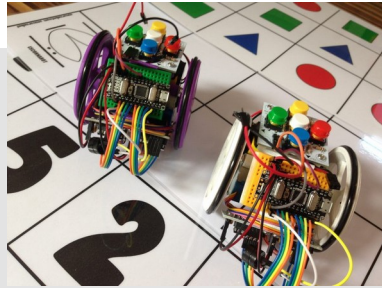
# iii Escornafan !!!

***Pablo Rubio***

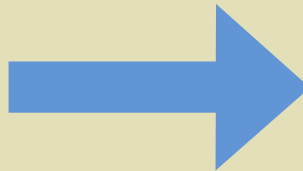
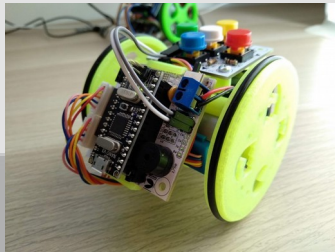
(<https://pablorubma.cc/>)



# Versiones



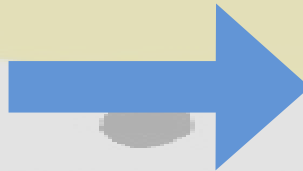
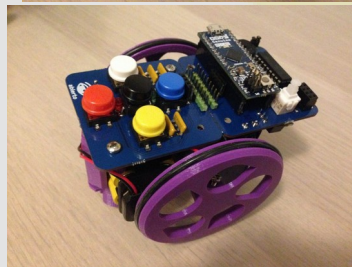
**Do It Yourself (DIY)**



**Compactus**



**Placa 2.12**

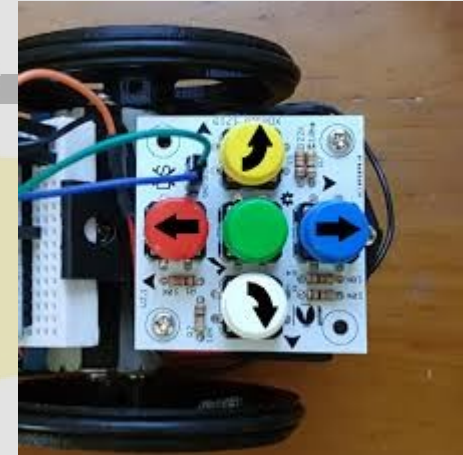


**Okagi**



# Funcionamiento y programación

- Introduce Firmware y se maneja con botonera (modo clásico)
- Se puede programar con librería para arduino e incluso poner sensores extras



```
Blink | Arduino 1.8.5

Blink 5

This example code is in the public domain.

http://www.arduino.cc/en/Tutorial/Blink
*/

// the setup function runs once when you press reset or power the board
void setup() {
  // initialize digital pin LED_BUILTIN as an output.
  pinMode(LED_BUILTIN, OUTPUT);
}

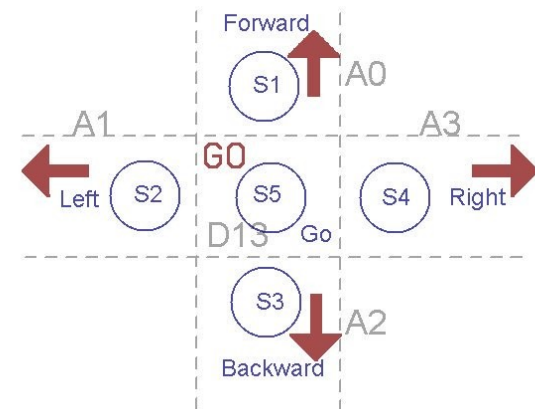
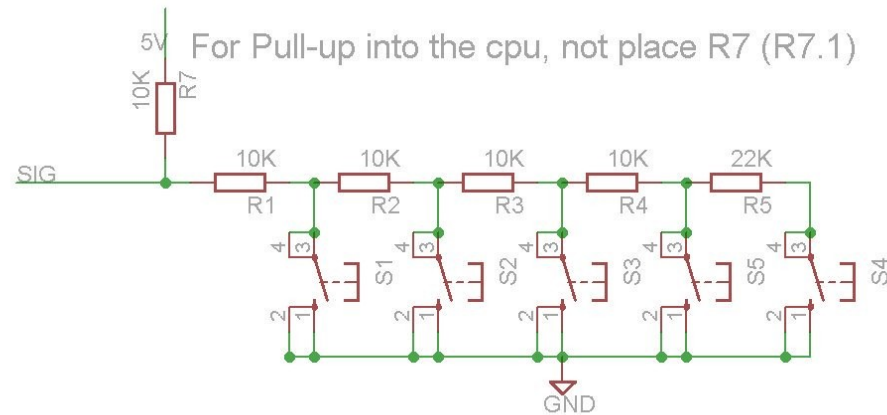
// the loop function runs over and over again forever
void loop() {
  digitalWrite(LED_BUILTIN, HIGH); // turn the LED on (HIGH is the voltage level)
  delay(1000); // wait for a second
  digitalWrite(LED_BUILTIN, LOW); // turn the LED off by making the voltage LOW
  delay(1000); // wait for a second
}
```



# Conexionado botonera

- Pin gnd: gnd de abajo (al lado D2)
- Pin 5V: 5V de arriba
- Pin Signal: A7 (arriba)
- Pin L1: A0
- Pin L2: A1
- Pin L3: A2
- Pin L4: A3

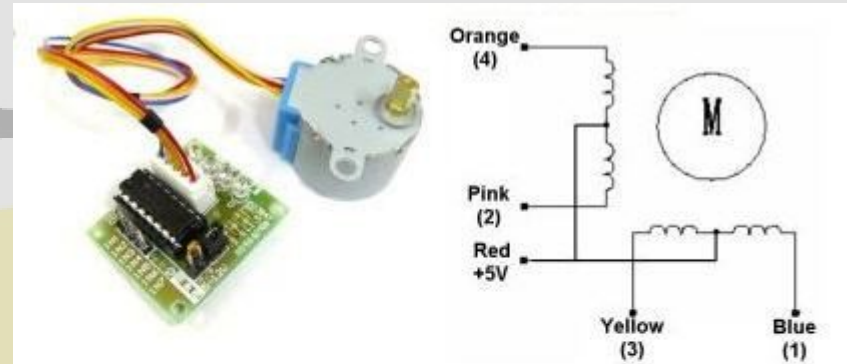
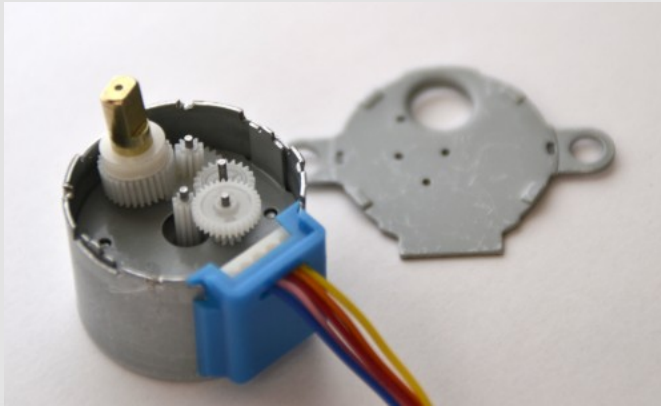
# Botonera



# Modos firmware 1.6.1

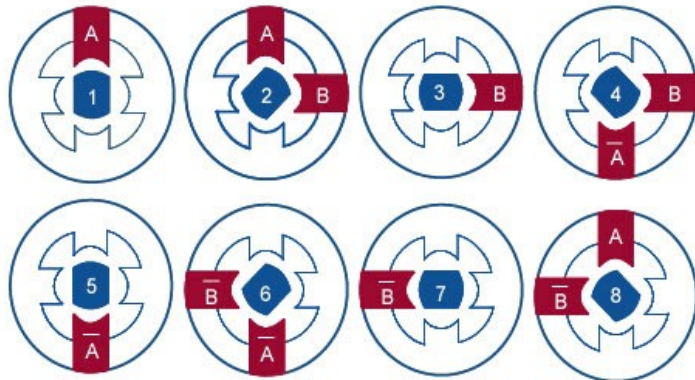
- Modo normal
  - Pulsación corta: giros  $90^{\circ}$
  - Pulsación larga: giros  $45^{\circ}$
- Modo  $60^{\circ}$  (tecla GO pulsación larga)
  - Pulsación corta: giros  $60^{\circ}$
  - Pulsación larga: giros  $120^{\circ}$

# Motor paso a paso



## Half-Step Switching Sequence

Lead Wire Color	---> CW Direction (1-2 Phase)							
	1	2	3	4	5	6	7	8
4 Orange	-	-						-
3 Yellow		-	-	-				
2 Pink				-	-	-		
1 Blue						-	-	-



64 pasos/vuelta x 64 reductora =  
4096 pasos para una vuelta