# Robot Beginner Kit with Arduino – Electronical Tutorial

Continues the installation of your Robot Beginner Kit by Robot-Domestici, in this article we assemble the electronics and begin to upload a sketch to calculate distances with the sensor.

1.   This tutorial starts with the description of the Motor Driver A1 Dual TB6612FNG: this is a motor driver with DC up 1A power and doesn't requires of a cooling flap.
Look at the opposite side to the components, you'll see screen-printed next to each pin of the corresponding function.
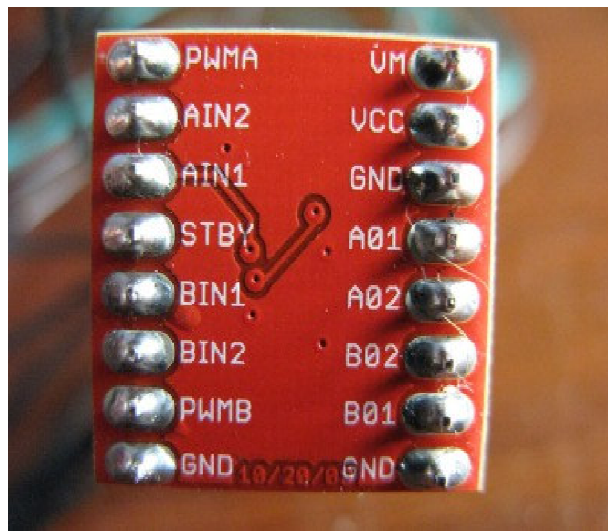
We will call "Arduino Side" the side with pins PWMA, PWMB, AIN1, AIN2, BIN1, BIN2 e STBY, and "Motor Side" the side where are the pins A01, A02, B02, B01.

1.   We starts with the "Motor Side".
The red arrow indicates the connection between VM pin to which you must connect "Power part" pin Vin of Arduino.

The blue arrow indicates the connection between negative pole (or GND) and the GND in "Power part" of Aruino.
The yellow arrow and the orange arrow indicates the connection to the left motor (yellow to positive pole and orange to negative pole).
The light green arrow and dark green arrow indicates the connection to the right motor (light green arrow to positive pole and dark green arrow to negative pole).
The last strip that says GND is connected to the Digital part pin GND of Arduino.
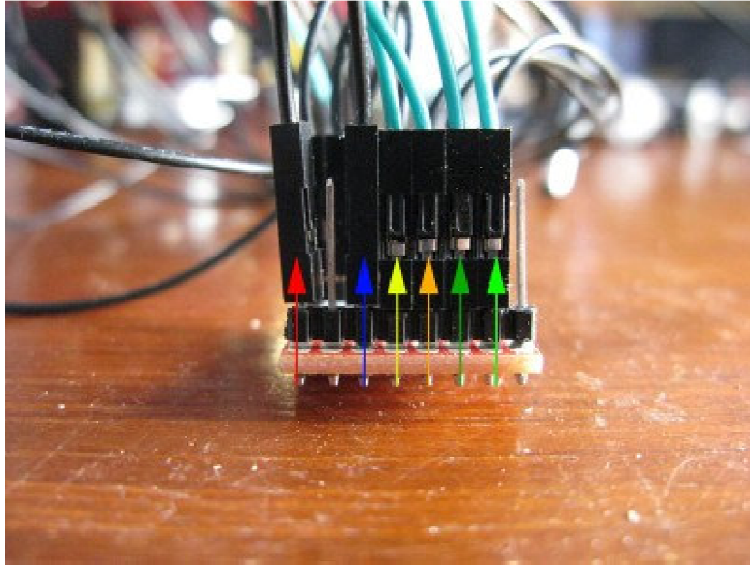
2.   Then we move to the "Arduino Side".
The blue arrow indicates the connection between STBY and the Digital pin 2 of Aruino (via sketch bring it to a high logic level).
The orange arrow indicates the connection between PWMA and the Digital pin 3 of Aruino.
The red arrows indicates the connection between AIN1 and the Digital pin 4 of Aruino, and between AIN2 and the Digital pin 7 of Aruino.
The green arrows indicates the connection between BIN1 and the Digital pin 8 of Aruino, and between BIN2 and the Digital pin 12 of Aruino.
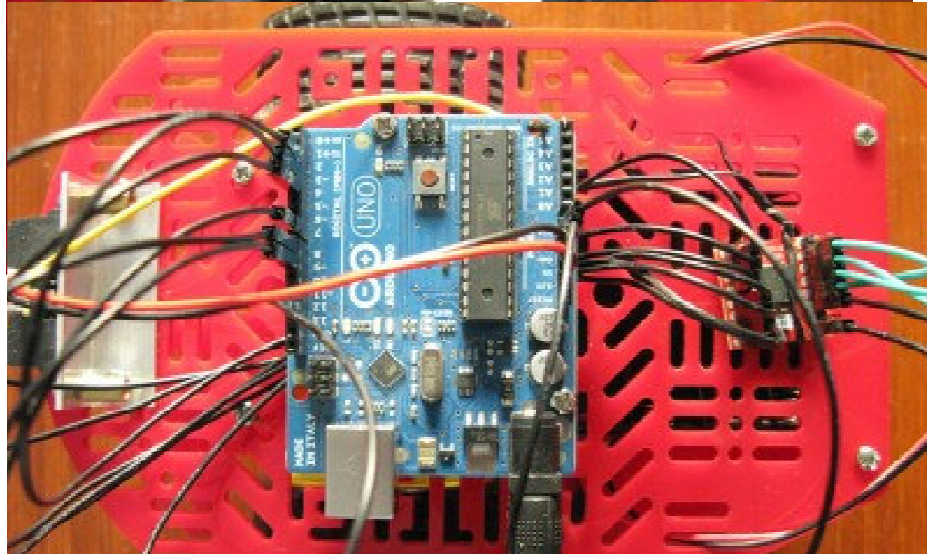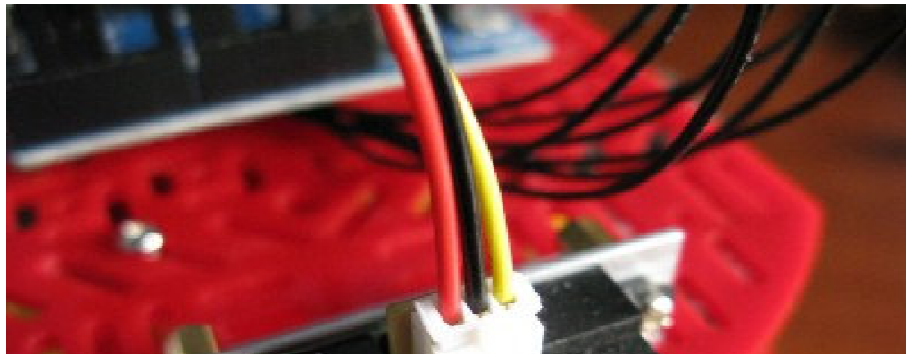The yellow arrow indicates the connection between PWMB and the Digital pin 9 of Arduino.
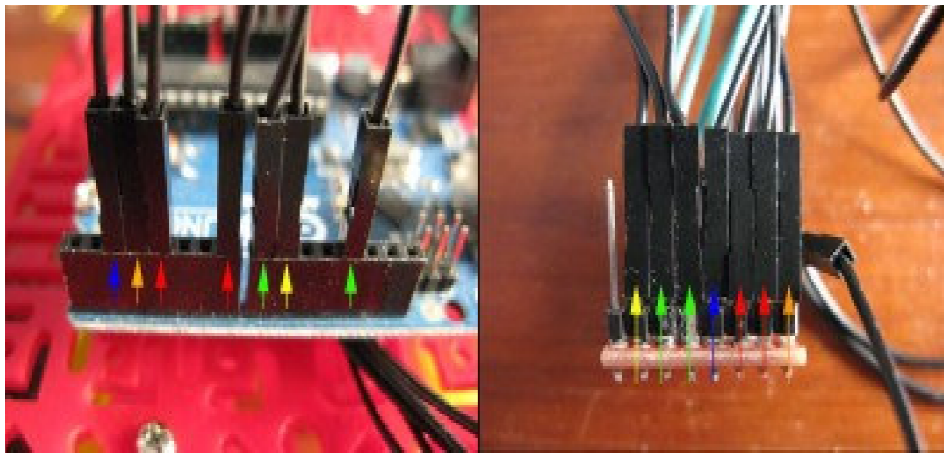
3.   Screw the Arduino Uno with the standoffs and fix the Motor Driver with scotch tape or a common metal clamp for cables.
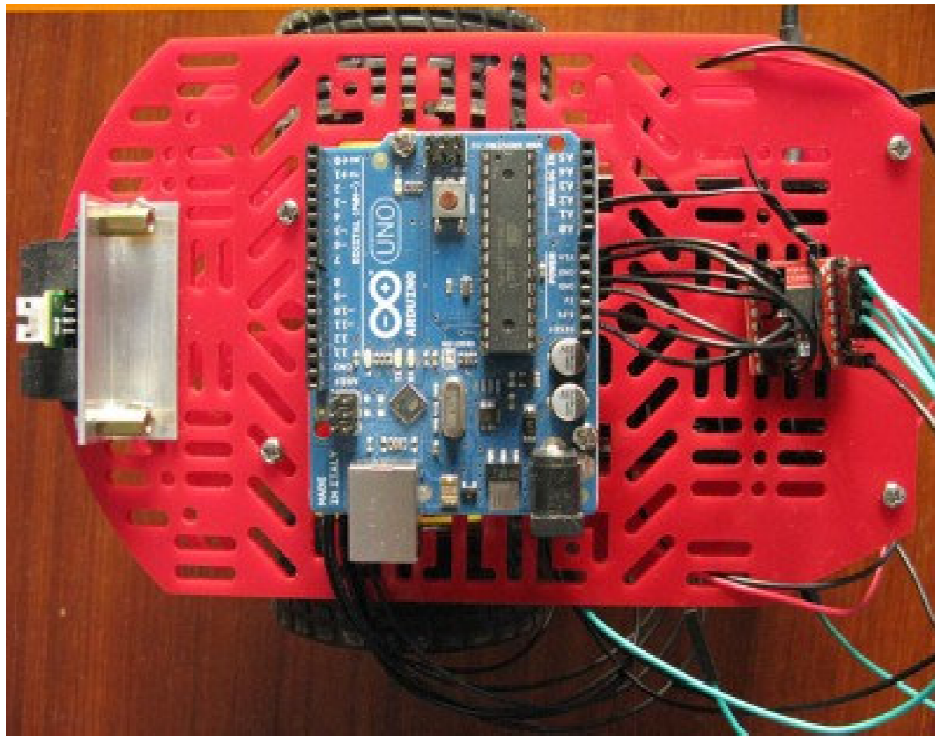
4.   Now we have to connect the sensor.
The yellow cable is connected to the Analog pin A5 of Arduino.
The red cable is connected to the "Power part" pin 5V of Arduino.
The black cable is connected to the "Power part" pin GND of Arduino.

And good   that's all, luck!