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Motor Rotation Using Arduino Uno

***Abstract*—It shows gradual increase and decrease of speed of DC motor. To achieve that we use analog-Write function.AnalogWrite uses pulse width modulation (PWM),turning a digital pin on and off very quickly with different ratio between on and off, to create variation in motor speed.**

1 Components Required:

1) Arduino board
2) DC Motor
3) L293D motor driver IC
4) Breadboard
5) Wires

2 circuit connection:

1) Refer the pin diagram of L293D motor driver IC

   Arduino/IDE/MotorControl/Figures/pin.jpg

2) Connect external 9V battery to the Vcc2 pin of L293D motor driver IC
3) Connect Vcc1 pin to 5V output on Arduino.
4) The input and enable pins(ENA, IN1, IN2) of the L293D IC are connected to three Arduino digital output pins(9, 8, 7).
5) Connect a motor to across OUT1 & OUT2 pins of L293D motor driver IC.

   Arduino/IDE/MotorControl/Figures/wiring.jpg

6) Go to ardunio IDE and Write the the following code

   Arduino/IDE/MotorControl/Codes

7) Click on Compile and Upload the code to Ardunio board.
8) Now you can see the variation in the motor speed.