Component Interfacing - 2

This file contains the instructions for interfacing the output modules listed below with Arduino ATmega2560 board:

1. LCD Interfacing
2. DC Motor
3. Buzzer
4. Servo Motor

1. LCD Interfacing

Required Hardware:

- Arduino Mega2560 board -1
- 16x2 Alphanumeric LCD -1
- 10K Potentiometer -1
- Jumper wires

Connect the LCD with Arduino ATmega2560 board mentioned above as shown in Figure 1 using Jumper wires.

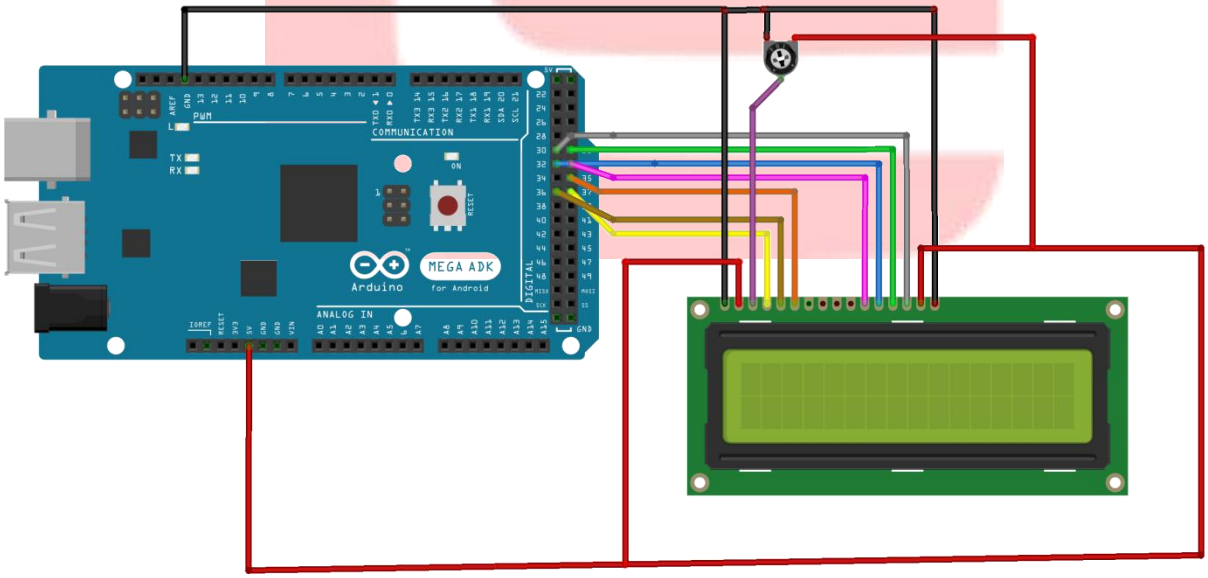

Figure 1: LCD Interfacing

2. DC Motor Interfacing

Required Hardware:

- Arduino ATmega2560 board -1
- 100RPM DC Motor - 1
- L298 Motor Driver - 1
- 7805 and 7809 Voltage Regulator IC
- Jumper wires

Connect the DC motor with Arduino ATmega2560 board mentioned above as shown in Figure 3 using Jumper wires.

3. Servo Motor Interfacing

Required Hardware:

- Arduino ATmega2560 board -1
- Servo Motor - 1
- Jumper wires

Figure 2: Servo motor (GS-5515MG)

Servo motors work on servo mechanism that uses position feedback to control the speed and final position of the motor. Internally, a servo motor combines a motor, feedback circuit, controller and other electronic circuit.

The pins of the servo motor are: **White: Signal, Red: VCC, Black: GND.**

4. **Buzzer Interfacing**

Required Hardware:

- Arduino ATmega2560 board -1
- Buzzer - 1
- Jumper wires

Connect the buzzer with Arduino ATmega2560 board mentioned above as shown in Figure 3 using Jumper wires.

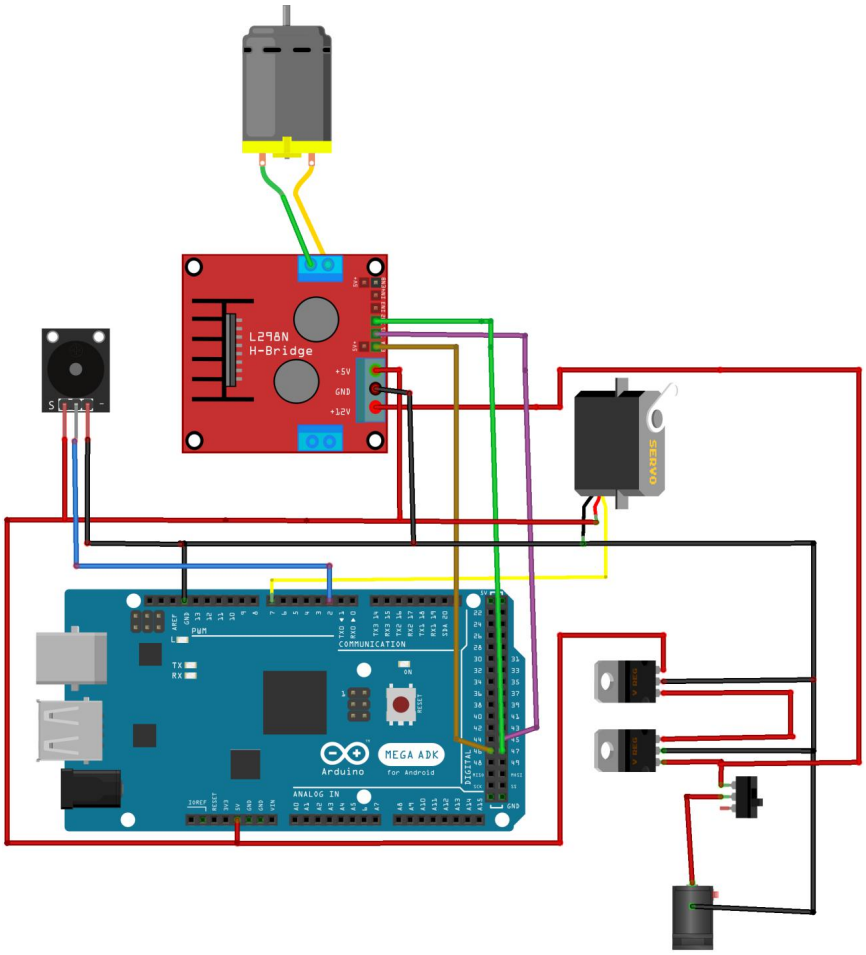

Figure 3: Component Connection

Note: 7805 and 7809 Voltage Regulator ICs are used for power supply to the robot. You will be using these ICs to regulate current flow for all the devices in your robot.