

Microcontrollers and Robotic

Week 5: Motor Control



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Motor Control

- Motor Types
 - Brushless
 - Step
 - Servo

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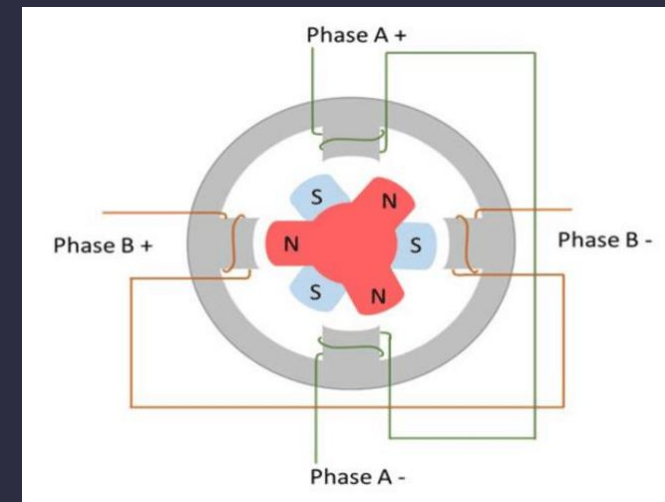
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Motor Control

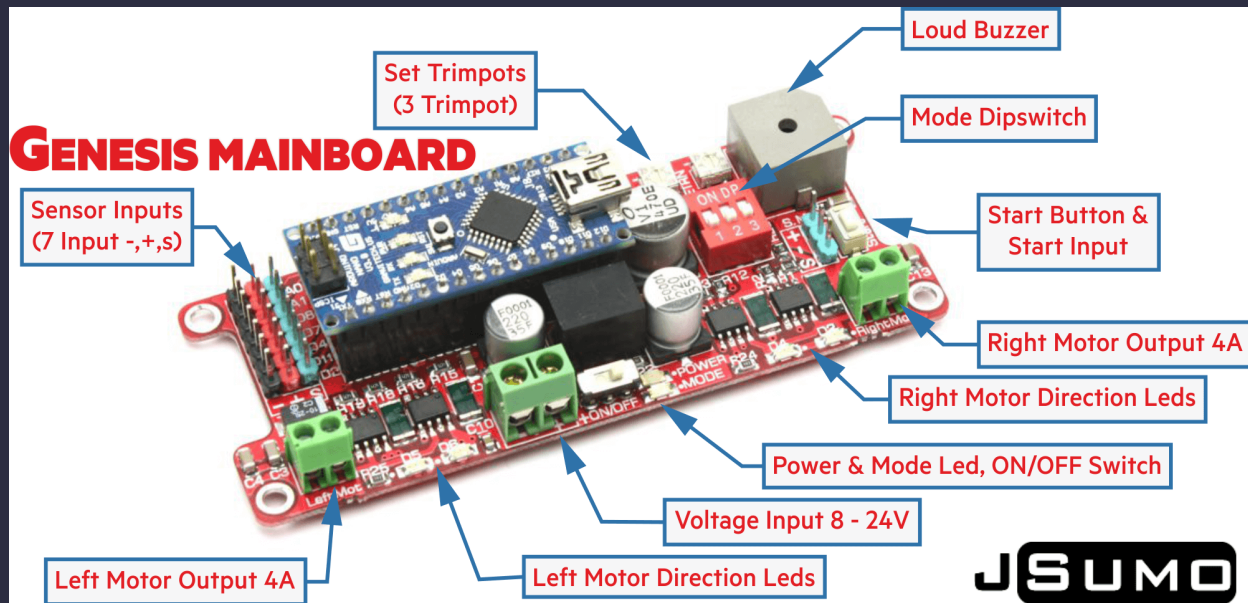
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Motor Control

- Our development kit has

2x Kronos 6V 400 Rpm Dc Motor



Motor Control

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2x Kronos 6V 400 Rpm Dc Motor Specs:

- They have 1000 rpm at 6V.
- Can increase the value of the applied power voltage up to 15V.
- Motor diameter is 16mm.
- Stall torque is 800gr-cm, Working Torque is 400g-cm.
- The weight of gear motor is 21 Gram.

```
analogWrite(LPwm, Lval);  
digitalWrite(LDir, LOW);
```


Motor Control

- Our development kit has

Arduinio motor control with Motor Control IC

Set direction and control voltage

```
analogWrite(MotorControlPin, value);  
digitalWrite(MotorDirectionPin, LOW);
```

Motor Control

- Arduino Mini Sumo Robot Kit

GENESIS ARDUINO NANO PIN TABLE

Arduino Pins	Purpose	Arduino Pins	Purpose
D0	Empty	D11	Right Motor PWM Channel (Speed Control)
D1	Empty	D12	Left Motor Dir Channel (Direction Control)
D2	Empty	D13	Right Motor Dir Channel (Direction Control), Arduino Nano Built-in Led
D3	Left Motor PWM Channel (Speed Control)	A0	Empty
D4	Empty	A1	Empty
D5	Dipswitch 1 Input	A2	Empty
D6	Dipswitch 2 Input	A3	Empty
D7	Dipswitch 3 Input	A4	Empty
D8	Mode Led (Can be used for any purpose)	A5	Empty
D9	Speaker (Can be used for any purpose)	A6	Turn A6 Set Trimpot
D10	Start Module & Button Input	A7	Speed A7 Set Trimpot