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## **H-Bridge Implementation for DC motor**

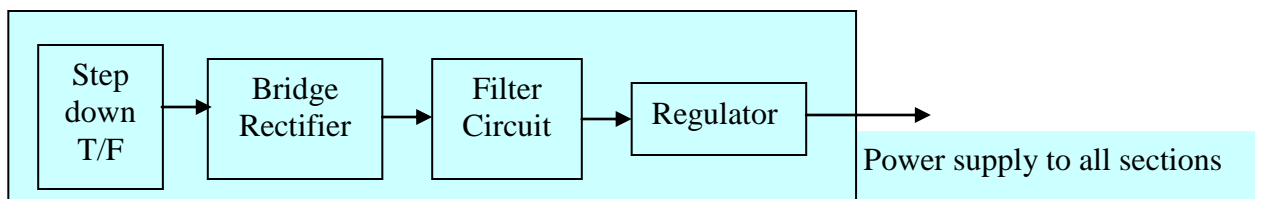
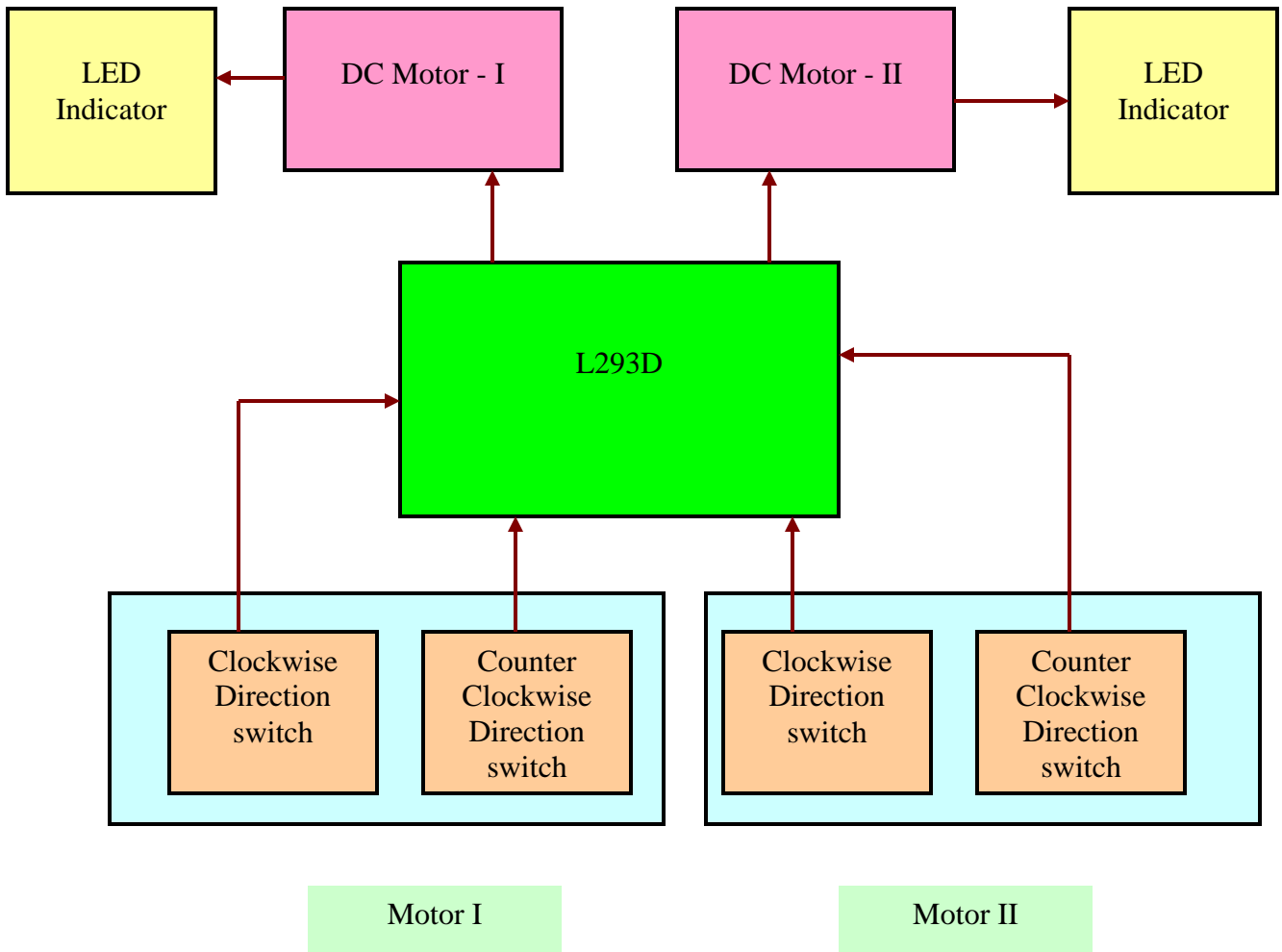
### **Direction Control**

DC motor control is an essential task in any robotic project. In many applications, DC motor is required to be rotated in clockwise and counter clockwise directions. For this purpose H Bridge is designed. In this project L293D IC is used to drive two DC motors.

This IC has 600mA output current capability per channel and 1.2A peak output current (non repetitive) per channel. This is also having enable facility, over temperature protection. The Device is a monolithic integrated high voltage, high current four channel driver designed to accept standard DTL or TTL logic levels and drive inductive loads (such as relays solenoids, DC and stepping motors) and switching power transistors. To simplify use as two bridges each pair of channels is equipped with an enable input. A separate supply input is provided for the logic, allowing operation at a lower voltage and internal clamp diodes are

included. This device is suitable for use in switching applications at frequencies up to 5 kHz. The L293D is assembled in a 16 lead plastic package which has 4 center pins connected together and used for heat sinking. The L293DD is assembled in a 20 lead surface mount which has 8 center pins connected together and used for heat sinking.

This project uses regulated 12V, 500mA power supply. 7805 three terminal voltage regulator is used for voltage regulation. Bridge type full wave rectifier is used to rectify the ac output of secondary of 230/12V step down transformer.



### **Advantages:**

Highly sensitive

Low cost and reliable circuit

Can drive two DC motors at a time

LED indication

Direction control for both the motors

### **Applications:**

Industrial Applications

Robotics

Conveyers

Printers

Xerox Machines

Cash counting machines