The L293D IC is a popular motor driver IC for an alternative to control motors without using an Arduino. The DC motors commonly used to control the movement of car. DC motors get data from IR sensors and control the motors. It’s a feedback control circuit it continuously monitor the line and provide the signal to the circuit.

**LM293D IC include Full circuit**

IR sensor is the base of this car because car is follow the black line using IR sensor output. IR module detect predefine black line and give the output data to LM358 IC. IR transmitter emits the IR-Rays to the ground. Black color absorb the IR-Rays other colors reflect the IR-Rays it helps to determine the position of the line. When IR detect object colors except black the output is high when detect black then output is low. This is the input to the LM293D IC to drive the motor or not. The motor rotation can be changed by changing the pins of the IC. We can run the car using the each IR module output is High and we can take cars turning paths using only drive one motor [only one sensor will be given the high voltage] at a time. IR module is choose the car’s moving path with detection and output will choose the motors function for an example,

If the IR detect each side different colors then car will move forward, if the one side of the IR module detect the black line the output voltage is low so motor will be stooped but another motor will be in function the car will be automatically turn other side.

This process will be continue until the each IR module detect the black line at same time. When the each IR modules detect the black line then output is low voltage so the motors will be stopped. Basic diagram of the circuit.

VCC

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Left Sensor Right Sensor

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L293D Motor Driver

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Left Motor Right Motor

Basic LM293D IC pin connections to the component,

* Positive(VCC) PINS = 1//16//7//8//9//10//IR module positive edge
* Negative(GND) PINS = 4//5//12//13//IR module negative edge
* IR MODULE PINS = 2nd pin for one IR module // 15th pin for another IR module
* MOTORS PINS = 3/6th pins for one motor // 14/11th pins for another motor