Design Test-bed for Driving System Automation

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Abstract

This system is mainly highlighted on the microcontroller based on automatic line following system. In the last few years, there has been a lot of interest in the area of automatic operations. This is partly due to the fact that the computer equipments have been closer with human and human-machine interaction has been required in many applications, e.g. health care for the elderly, domestic robot, entertainment, agriculture, etc. Therefore it is necessary to establish an automatic control system without cooperate with human. Among the various PID control system, tuning method is not only to control and but also to adjust its control parameters to get the desired control response. So, this tuning method is suitable for automatic system. Nowadays, our environment needs the auto-driving system in order to get the good transportation. This paper describes the method of how to control the auto-drive system used in car, how to control the DC motor speed control and how to demonstrate the some features of auto-drive system.

We propose a control system to cooperate with human based on PID instructions. The object (car) will move along the lane and it can test the environment conditions in order to change object's position. At least 2 LDRs sensors will be used in tested to test the path line and environment condition.PIC 16F84A is used as an interface between the controller (PID) and electric circuit.PIC Basic Pro programming is used for designing the PIC circuit.