DEVELOPMENT OF A MICROPROCESSOR BASED STEPPER MOTOR POSITION AND SPEED CONTROLLER

BY

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SUMMARY

Development of a Microprocessor Based Stepper Motor position and speed controller.

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This project deals with the design construction and testing of a Z80A based microcontroller and a stepper motor interface. It also includes a program that is entered to the system for speed and position control of a stepper motor.

The 1st Chapter describes the design of the microcontroller, including I/O interfacing methods, memory types and stracture, chip select decoding and bus buffering.

The 2nd Chapter refers to the design of the Stepper Motor interface with an introduction to Stepper Motor stracture and operation.

The 3rd Chapter deals with the design of the additional circuits of the system, Clock Generator, Reset circuit and Power Supply.

Chapter 4 is related with the Software design and explanation.

Chapter 5 explains the method followed for the construction and testing of the system.

Finally, Chapter 6 recommends applications of the system in everyday life.

The main conclusion deriving from the completion of the project is based on the practical application that the system offers in electronic equipment, where precision and reliability in mechanical movement is of highest priority.

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