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Ahmed A/Rahim Khamiss

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بسم الله الرحمن الرحيم

Abstract

In this research work a comprehensive study of stepper motors has been done. The presentation included a historical review as well as the state of the art of stepper motor modern technologies. The detailed study included types, constructional features and performance characteristics. The performance of stepper motors is directly governed by their drivers and control circuitry. While commercial combined drivers and control sequencers are commercially available, there is a clear benefit for building locally designed driver and control sequencer from common integrated circuits and discrete components. The maintenance of such a module would be easy and complete replacement of commercial module is necessary. Stepper motors are commonly controlled by a computer or a microcontroller. An interface circuit using the parallel port of a pc has been designed to control two bipolar stepper motors by using c programming language. The designed system of computer control for two stepper motors has been tested and good results have been obtained.

بسم الله الرحمن الرحيم

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Sudan University of Science and Technology
College of Graduate Studies

The Control of a Stepper Motor

A thesis submitted in partial fulfillment of the requirement for the Degree of Master of Science in Electrical Engineering (Microprocessors and Electronic Control) to the College of Graduate Studies.

By: Ahmed A/Rahim Khamiss
B.Sc. (Electrical Engineering)

Supervisor: -
Prof. Ali Mohammed Ali

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Elect. Eng. Department

Faculty of Engineering

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