

PC BASE TAP CHANGER

**This is presented in partial fulfilment for the award of the
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ABSTRACT

Personal Computer Base Tap Changer

by using Stepper Motor

by

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This project describe the development of PC Base Tap Changer by using computer controlled. Tap Changer one of the most economical controlled switch that will change the tap connections as required to maintain a constant output voltage. L297 Stepper Motor Controller divide input clock pulses from the timer is used to control the rotation of the stepper motor. The computer generated pulse motor controller to control the exact angle of the rotor shaft at any future time by simply counting the total number of pulses which it has sent to the control unit of stepper motor. In this project, the software and hardware developed provide suitable tools for research or teaching in electrical machine.

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CHAPTER 1

1.0 INTRODUCTION

A stepper motor is a special type of synchronous motor which is designed to rotate a specific number of degrees for every electric pulse received by its control unit. Typical steps are 7.5° or 15° per pulse. These motors are used in many control systems, since the position of a shaft or other piece of machinery can be controlled precisely with them.

Stepper Motor are very useful in control and positioning system because the computer doing the controlling both speed and position stepper motor. However the voltage ratio of this transformer of tap changer can be setting and adjust variable voltage by manually operated. To overcome these problem tap changer can be operated and controlled by computers will be useful. For this project, the interface card unit will be connect to the circuit for stepper motor. The whole block diagram is shown in Fig. 1.1.