

**DEVELOPMENT OF COMPUTERIZED RESTRICTED ENTRY
SYSTEM USING MAGNETIC STRIP READER AND
PERSONAL IDENTIFICATION NUMBER**

**This is presented to fulfill the
requirement of Advanced Diploma in Electrical
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ABSTRACT

The purpose of this project is to develop a computerized restricted entry system using magnetic strip reader and personal identification number . This project utilizes the magnetic stripe system which is very popular in the world of finance and security to be utilize as a restricted entry system . The system uses a computer as its main brain to control the flow of person inside and outside of a building . The computer also controls the alarm , door , sensors and etc. that are installed in a building . This project is very important for a crowded building where the system will keep trace of the movement of every personnel .

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1.0 INTRODUCTION

1.1 Introduction

Magnetic stripe is the favourite child of the data processing industry . Directly derived from the application of a strip of magnetic tape to documents in daily use , it promises to support large amounts of data at low cost and to capture and update it with ease .

The magnetic stripe was first used in the late 60's . A few years later the magnetic stripe was an established technology adopted on a large scale by the financial industry ,by some large mass transit systems, in the most advanced access control ,time and attendance and production control systems , and it was also a proposed standard for the retail industry.

1.2 The Magnetic Stripe

The magnetic stripe is a thin layer of gamma iron oxide or barium ferrite applied to a paper or plastic support by thermal transfer from magnetic tape or in ink form . Gamma iron oxide has a coercivity of 300 Oersted, barium ferrite of 4,000 Oersted. The coercive force is a measure of the magnetic field required to magnetise or record data .

Normal stripes are made of iron oxide particles which can be magnetised by applying a magnetic field of coercivity $H_{ci} = 300$ Oersted .