

HIGHER TECHNICAL INSTITUTE ✓
ELECTRICAL ENGINEERING DEPARTMENT

DIPLOMA PROJECT

FIRE AND INTRUDER ALARM SYSTEM

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FIRE AND INTRUDER ALARM SYSTEMS

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CONTENTS

Acknowledgements.....	iii
Summary.....	iv
Introduction.....	v
CHAPTER -1- Fire alarm systems	1
Section -1- Fire alarm equipment	
Section -2- System planning and design	
Section -3- Equipment used	
Section -4- Testing and maintenance	
Section -5- Comparison between a domestic fire alarm system and chemical labs system	
Section -6- A fire alarm circuit	
CHAPTER -2- Fire fighting system.....	20
Section -1- Equipment used	
Section -2- System planning and design	
Section -3- Testing and maintenance	
CHAPTER -3- Intruder alarm system.....	27
Section -1- Intruder alarm system equipment	
Section -2- System planning and design	
Section -3- Equipment used	
Section -4- Testing and maintenance	
Section -5- Comparison between a domestic intruder alarm system and a bank system	
Section -6- An intruder alarm circuit	
Conclusions.....	47
References.....	48
Drawings.....	49
Appendices.....	50

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SUMMARY

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FIRE AND INTRUDER ALARM SYSTEMS

In nowadays it is necessary the use of a fire alarm system or an intruder system in houses, supermarkets, banks, public places. People need and want to be protected by any kind of fire or other activities that may threat their lives and properties.

Fire alarm systems are generally installed in order to save people lives and minimize fire damage to buildings and goods. The earlier a fire is detected and the alarm sounds the faster is turn off.

Intruder system discourages the intruder to break in the building and in case of intrusion gives a warning alarm. It may also activate an alarm if a precious item is removed. As the intruders manage to de-activate a system the manufacturer seek new approaches which are always more and more complex.

This project studies the equipment used in fire alarm system and intruder alarm system. It presents an example of the design and construction of these two systems in a single floor building and the equipment used. Drawings of the building and the installation of the systems are included in the project.

The design and the construction of these systems are according to British standard regulations, such as the systems become effective and operate without any false alarms or other problems.

Moreover, a brief study of fire alarm and intruder alarm circuit and a general comparison between a domestic fire alarm system and a chemistry system, took place in the project. Also, a comparison between a domestic intruder alarm system and a bank's system is included.

INTRODUCTION

During the 20th century humanity had achieved great development in technology that changed the world importantly. This development continues in the present and will continue for ever. Fire alarm and intruder alarm system is a very small region in the gigantic field of technology.

These systems improved the life of people by installing them in their properties as they fight fire and crime with a great weapon. Few years ago only banks and buildings with precious things were using protection systems, but nowadays a lot of houses install them too because they fear both fire and burglars. Also cars, especially expensive and not only, are using now this equipment.

A fire alarm system will detect the fire before becoming dangerously expanded. A fire fighting system is special equipment which has the ability to put out the fire. It is usually installed in places with valuable or personal things.

An intruder alarm system is an electrical installation that detects and indicates the presence, entry or attempted entry of an intruder into protected area.

The fire alarm system and the intruder alarm system are connected to an auto-dialer, which informs the police or the fire brigade for a fire or an intrusion.

All these systems are installed according to British Standard regulations. BS4737 for intruder systems and BS5839 for fire alarm systems. Inspection and testing of wiring shall take place after the installation. Periodic maintenance must be followed, in order for the system to operate properly without any problems or false alarms.