

CENTRAL MONITORING ALARM SYSTEM

**Thesis is presented to fulfil the requirement of Advanced Diploma In Electrical
Engineering of MARA Institute of Technology**

ZUHAIRY BIN MAHIDIN

MAY 1994

**Department of Electrical Engineering
School of Engineering
MARA Institute of Technology
40450 Shah Alam
Selangor Darul Ehsan
MALAYSIA**

ACKNOWLEDGEMENT

In the name of **Allah**, the Beneficent, the Merciful, We pray to **Allah** for give me patient in completing my project.

I would like to take this golden opportunity to express my most appreciation and heartfelt gratitude to Mr. **AHMAD MALIKI BIN OMAR**, as my project supervisor, for his guidance, encouragement and help me a lot from beginning up to the end of my project.

I also would like to forward my special thanks to all lecturers in Research and Development lab and technicians who gave me valuable information's, various suggestions in improving the project and give me full cooperations towards success of my project. I also would like to thank to Mr. **Abd. Rahman Bin Abdullah Hashim** from Land Survey Department, MARA Institute of Technology, Shah Alam for his effort and guidance in making the double - sided PCB.

Last but not least, my special thanks to my friends and many other who some how or other had helped me directly or indirectly in successful of my project.

ABSTRACTS

The purpose of this project is to design the hardware and to develop the software to centralised the fire alarm system. The existing fire detector alarm panel is equip with Charge Fail, A/C Fail, Battery Fail, Buzzer, Master Alarm, Alarm 1, Alarm 2 and Alarm 3. All this information will be centralised at a central control room.

The circuit developed can detect the sensor status up to 512 locations with the selectable scanning rate of 9600 baud rate. The software has been program to detect the failure at each location. The failure will be highlighted on the personal computer screen by '*' symbol as an indicator. Therefore, the security officer will know the location of the failure.

The software parts was done by using the Quick Basic high level language. Which is easy to understand and also make it easier for other people to develop and change the program for future modification.

TABLE OF CONTENTS

Topic	Page
Dedication	i
Approval	ii
Acknowledgement	iii
Abstracts	iv
Table Of Contents	v
1.0 INTRODUCTION	1
1.1 Introduction	1
1.2 Scope of Project	3
2.0 DESIGN CONSIDERATION	6
2.1 Multiplexer/Demultiplexer	6
2.2 Address Decoder	8
2.3 Latch	10
2.30 D-type Latch Flip-Flop	10
2.4 Buffer	12

1.0 INTRODUCTION.

1.1 Introduction.

Basically, the Central Monitoring Alarm system can be divided into two major parts, it is hardware part and software part. Firstly, it has to design and develop the hardware in order to centralised the fire alarm system. Secondly, there was a need to program and develop the software in order to centralised the fire alarm system. Where, all this information will be centralised at a central control room.

There are sixty-four blocks, which can be controlled separately at each building and it is also called as local system. The existing fire detector alarm panel is equip with :

- i. Charge Fail Alarm.
- ii. A/C Fail alarm.
- iii. Battery Fail Alarm.
- iv. Buzzer alarm.
- v. Master Alarm.
- vi. Alarm 1.