

CHAPTER 1

INTRODUCTION

1.1 Project Background

This indoor monitoring system work as baby monitor especially for nursery with more than a baby. It is a security system for a baby and to improve the baby sitter's working performance with fast action. This monitoring system will help the baby sitter's to keep an extra eye on the baby at the nursery.

Recently most of the households and also in the nursery have one or more computers. It allows development of low cost PC (Personal Computer) based baby monitoring system. This system will alert the baby sitter by an alarm and see what is going on at the nursery. This system also provide the ability to make sure the baby is secure with the environment at the nursery and the most important is to avoid the bad things occur to the babies.

Sometimes, the babies in the nursery are too active or more specific hyper-active. The babies will move, crawl or walk in the nursery and the baby sitter cannot spend all the time there for each babies. The baby might come to the bathroom, kitchen or they can go out through the entrance. Thus, to avoid the unwanted situation happen to the babies, the Baby Monitoring System in Nursery will make sure the babies are safe.

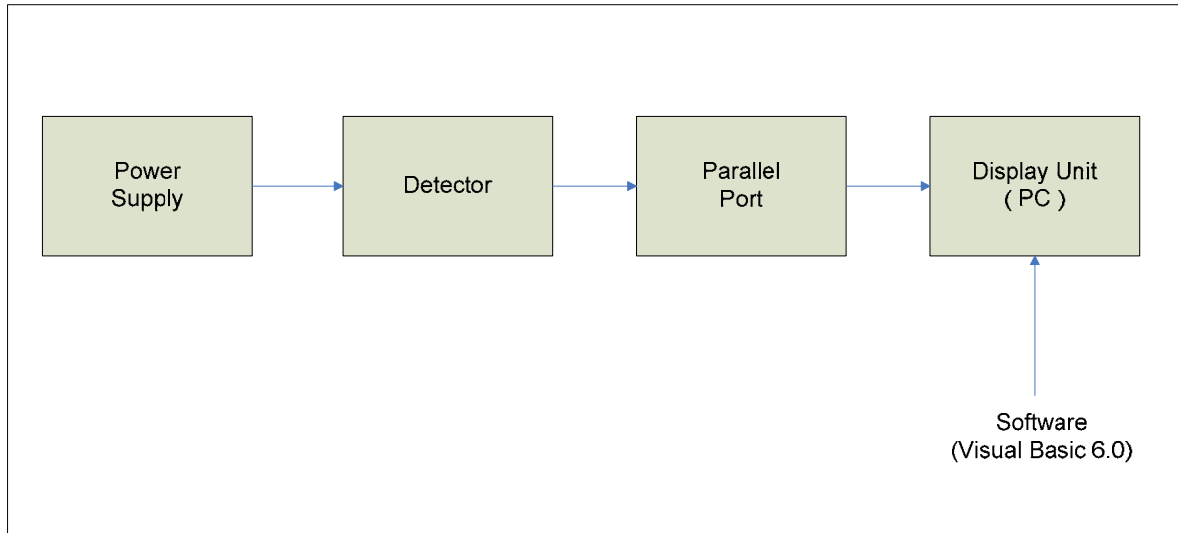


Figure 1.1 : Block Diagram of Baby Monitoring System in Nursery

Motion detector circuit is used to detect the baby's movement and placed at each door in the nursery. If the baby is out of area and pass through the detectors, the system will fully operated. The alarm and the computer display are fully functioning.

1.2 Objectives

- i. To design, construct and test the Baby Monitoring System in Nursery.
- ii. To provide security for the baby to make sure the babies are always safe in the nursery.
- iii. To improve the baby sitter's working performance with fast action.

1.3 Scopes of Project

Basically, the scopes of the project are :

i) Hardware

This project is using an Infra Red (IR) Motion Detector. The detector communicates with the software part through the parallel port.

ii) Software

Microsoft Visual Basic 6.0 is used to communicate with the hardware part through the parallel port.

iii) Mechanical Design

This project also consists of mechanical part for nursery prototype construction.

1.4 Problem Statement

Each baby in the nursery is not protected enough by security system that will cause the baby in a risky situation even if they are in the nursery. The baby sitter cannot keep an eye on the baby at all the time in the nursery especially when there have several numbers of babies.

1.5 Aim of the Project

The main idea here is to provide an extra security for the baby at the nursery. The detector will detect the baby if the baby out of area in the nursery or the baby moves to unsafe area such as the bathroom, toilet, kitchen or going out of the nursery. If the situation occurred, the detector will send the signal to the system and the computer screen will display where the area is. At the same time an alarm will alert the baby sitter.

The baby sitter will take an immediate action on what is actually happen. If nothing happened or the detector does not detect any movement, the system will only display the normal situation at the nursery. The display is just a 2D view from top of the nursery.