IJESRT

INTERNATIONAL JOURNAL OF ENGINEERING SCIENCES & RESEARCH TECHNOLOGY

SMART POWER CONTROLLING & SAVING SYSTEM

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ABSTRACT
The main aim of this paper is to design and employ ofthe power saving in general public places like Auditoriums,Shopping Malls and Theatres etc.Normally an Auditorium consists of many no. of electrical and electronic object's. To control and monitor all these object's, component's or appliances we need a person handlingsystem. In this project paper we are representing the working of smart power controlling and saving system in auditoriums, shopping-malls, Colleges, Hospital, Theatres etc. By using these electronic circuitto reduce the human efforts. This paper describesthe whole working of electrical and electronic devices with automatic control and also power saving in Shopping malls, College, Halls, Hospitals, Theaters and Auditoriums. To implement this we have used MCS 51 family microcontroller, IRsensors(Light Dependent Resister), 16X2 LCD. Microcontroller 51 family Microcontroller is used to controlthe total operation. The Microcontroller8051 family's microcontroller 89C51 are famous for these projects.

KEYWORDS: Microcontroller, IR sensors/LDR, LCD display, ULN driver, relay and AC/DC loads

INTRODUCTION
Today energy isa more important thing in the world. So, we have to save the energy to give for our next generation. This system are preferred over manual controlling. The design of energy controlling & saving project can handle controlling of electrical and electronic objects. Through this project we are tried to show a way to control the power consumption and power or energy saving in Hall, Malls, Theatres, College, Platforms, Hospitals etc. Now in all cities we have Malls, Theatres , Colleges, Halls, Hospitals Auditoriums. In this monitoringcontrolling the appliances becomes very typical to human being. If less number of persons enters in theAuditorium then no need to switch on all the devices in that. If they on it is wastage of energy. If maximum persons arein Auditorium then we need to ON all the devices or equipment without fail. This is difficult to maintain properly and manually. If suddenlyany problem arise, it is very difficult to find out. To overcome these types of problems we are developed a systemthat can maintain all these ricks. This paper covers the specification of capacity of monitor, hardware description, the useof different types of sensors.

MATERIALS
- Power Supply
- IR sensor
- Microcontroller
- LCD
- Load
- Relay

FUNCTIONAL BLOCK DIAGRAM
It is the base of the system. The microcontroller a different type of integrated circuit is a whole PC on a chip, containing all the object of the basic microprocessor along with other specialized functions like serial communication, interrupts, timing circuit Read Only Memory , Random Access Memory. Basically a Microcontroller is a computing device, and is a single integrated circuit used to form part of a generation that incorporates some software program control. As a microcontroller(8051) is basically part of a computing system it can be used in applications requiring control, operator and user display generation, simple sequencing and many other mundane tasks.
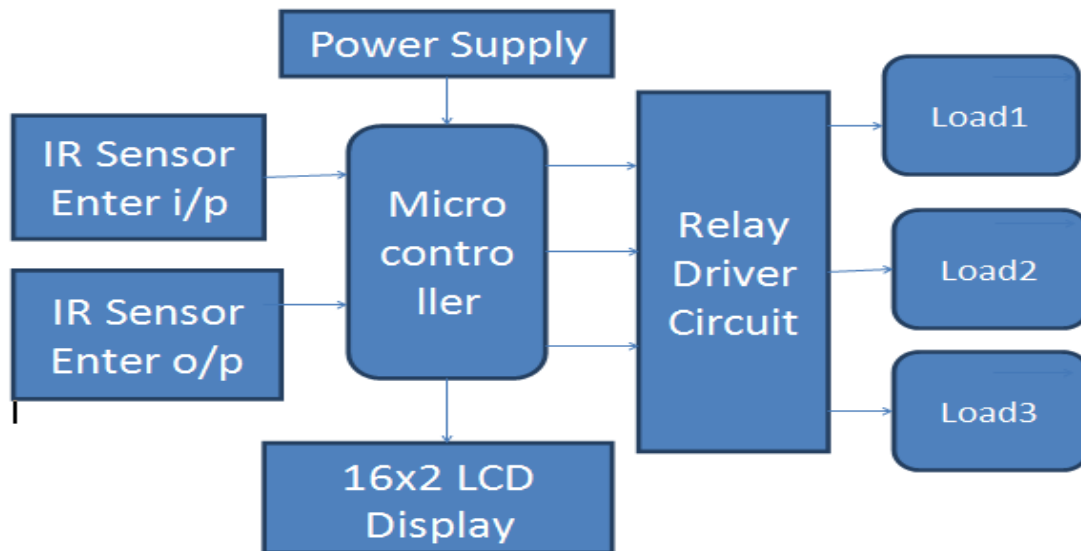
Fig 1.Block for Smart Power Controlling & Saving System .

ADVANTAGES

- simple structure.
- small size.
- low power consumption.
- low cost and stable.

CONCLUSION

In this experimental setup, we are able to turn automatically the appliances ON and OFF as required and securityalarm. By implementing this setup, we can expect more power conservation and high security. This device is compatible with our existing system used for providing comfort.In this paper we have developed a real time model that can control and monitor the complete status of all appliancesof any place like auditorium, shopping mall, school etc. Automatically without having human interference.

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