

# Street power monitoring using PC & GSM

Samani Ravi<sup>1</sup> Modi Payal<sup>2</sup> Shah Pooja<sup>3</sup> Mahida Priyank<sup>4</sup> Tailor Kewal<sup>5</sup>

<sup>1, 2, 3, 4, 5</sup> B. E. Student

<sup>1, 2, 3, 4, 5</sup> Electronics & Communication Engg. Department

<sup>1, 2, 3, 4, 5</sup> Government Engineering College, Bharuch, Gujarat, India

**Abstract**--This paper intends to solve the problems when generally we can see a person waiting for complain for any kind of street power failure. In that case responsible person is attended complain immediate or not time is not accountable at all. Because of this manual system just consume the time. Aim to design this Street Power Monitoring and Analysis by PC & GSM help the government and it will save the time of the employees working in these boards. Also this system monitoring of mis-management of boards.

**Keywords:** Street power, GSM, Micro-controller

## I. INTRODUCTION

In today's life, no one can work without light as power is the major & basic need. No one likes to waste their time due to power failure. Our research is to serve the street light system when the technical problems cause street power failure.

The Automatic GSM based Monitoring system is very useful to save time. In this system the circuit is designed so that whenever the technical fault occurs then due to micro controller programming the authority will receive the message about particular faulty street tube area. so the servicing of problem can be solved.

## II. DESCRIPTION

Street power system is well known in India and life line in villages. Traditional method of monitoring and controlling street power are relatively simple in order to determine that a street power is not operating correctly, municipalities typically depends on report from the public or maintenance crew.

In our daily life we come to use street lights if there is fault occurs likes there is problem in fuse, light blinking, due to individual cut off, then we get rid of the long procedure of complaining to GEB as sms is sent to the main authority. He or she would send the worker to repair it. And after this there is the voice sms is sent to the main authority if the problem is not solved in given duration. Thus, by our project we will get better street light services with enhanced performance.

## III. IMPLEMENTATION METHODS

There are three method of implementation of our system.

### A. Using GSM modem and Microcontroller

In this method, GSM modem is interfaced with the microcontroller. Assembly language program is loaded in the microcontroller and GSM modem is worked with them. The SMS is received at the microcontroller through the GSM modem and give response through SMS is also with GSM modem. The system sends SMS to GSM modem and

microcontroller execute it and give a SMS to GSM modem and then to authority.

### B. GSM modem interface with Windows application in PC

In this system, GSM modem is interfaced with the computer. A windows application in installed in the computer and it works on it. The program is made in the assembly language and install in PC. The GSM modem is received the SMS and the microcontroller receives SMS through GSM modem and sends SMS through GSM modem also. The error detection circuit will detect the error and send the message to the PC provided with authority.

## IV. BLOCK DIAGRAM OF PROJECT

In this project, 8051 microcontroller is interfaced with the GSM modem through MAX 232. There are two types of power supply: 12 V power supply and 5 V power supply. A 12 V power supply is given to the GSM modem and 5 V supply is given to the microcontroller and MAX 232. Both power supplies are take form the 230 V using different ICs and transformer & RC filter. The design uses RS-232 protocol for serial communication between the modems and the microcontroller. A serial driver IC MAX 232 is used for converting TTL voltage levels to RS-232 voltage levels.

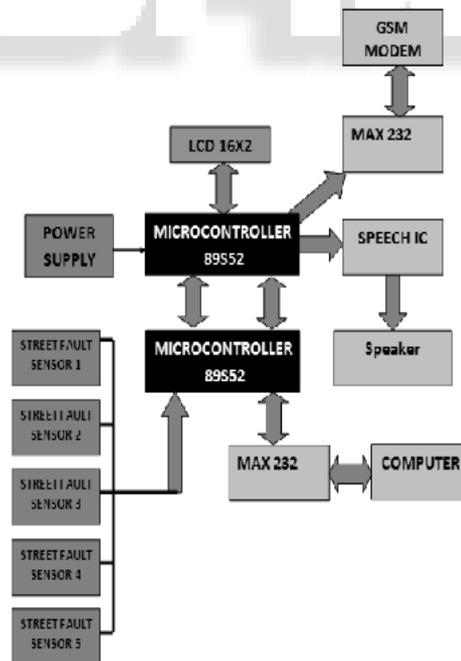


Fig. 1: Block diagram of system

As shown in the circuit diagram the working of the master Micro-controller is that when the fault is detected it gives a signal to slave micro-controller that there is fault in the system and it has to send a message to the authority.

This is the Micro-controller slave section. Once the fault is detected by the master controller than after One LCD screen is connect with this controller which is connect with the GSM modem is send the message to the authority. There is also the facility of the voice message .For voice message we use the ICs a8942A. That means this ICs can store the voice note of 42 sec long. And we can operate digitally with the help of the Micro-controller.

#### V. LIST OF COMPONENT OF PROJECT

##### *Hardware:*

GSM Modem SIM 300

Microcontroller

MAX 232

RS 232

Voice ICs

##### *Software:*

Keil uVision 3.0

#### VI. CONCLUSION

The Project titled “street power monitoring using GSM & PC” is useful for the regular, remote customers as well as government subsidiaries. It is our sincere effort to save the time as well as money and help GEB to make system efficient.

#### REFERENCES

- [1] Mazidi, Muhammad Ali, 8051 Microcontroller and Embedded Systems, The (1st Edition) 1999, Prentice Hall
- [2] K. J. Ayala, 8051 Microcontroller, Architecture, Programming & Applications, Second Edition, Penram International Publishing (India), Mumbai, 1998.