
RAILWAY ACCIDENT IDENTIFICATION AND ALERT SYSTEM

ABSTRACT

This project is aimed to design a railway accident identification and alerting system by using wireless communication GSM technology.

A GSM modem provides the communication interface. It transports device protocols transparently over the network through a serial interface. A GSM modem is a wireless modem that works with a GSM wireless network. This GSM Modem can accept any GSM network operator SIM card and act just like a mobile phone with its own unique phone number. Advantage of using this modem will be that you can use its RS232 port to communicate and develop embedded applications. Applications like SMS Control, data transfer, remote control and logging can be developed easily. The modem can either be connected to PC serial port directly or to any microcontroller. It can also be used in GPRS mode to connect to internet and do many applications for data logging and control. In GPRS mode you can also connect to any remote FTP server and upload files for data logging.

This GSM modem is a highly flexible plug and play quad band SIM300 GSM modem for direct and easy integration to RS232 applications. Supports features like Voice, SMS, Data/Fax, GPRS and integrated TCP/IP stack.

This project is designed in such a way that a GSM modem is interfaced to the controller using serial communication. The main aim of this project is to alert people from railway accidents by using vibration sensor. A vibration sensor is interfaced to the controller. This sensor can found railway accidents. Each railway coach contain single vibration sensor. If train move normally no vibrations occur. If accident occurs any one of the sensor in train must be activated and microcontroller takes signal from the sensor. After detecting pulse from sensor microcontroller sends SMS to particular numbers through GSM modem and for alerting buzzer will be on. Microcontroller sends accident report along with coach number which is affected by accident. This effected coach number find out by sensor physical placing in coaches. A buzzer

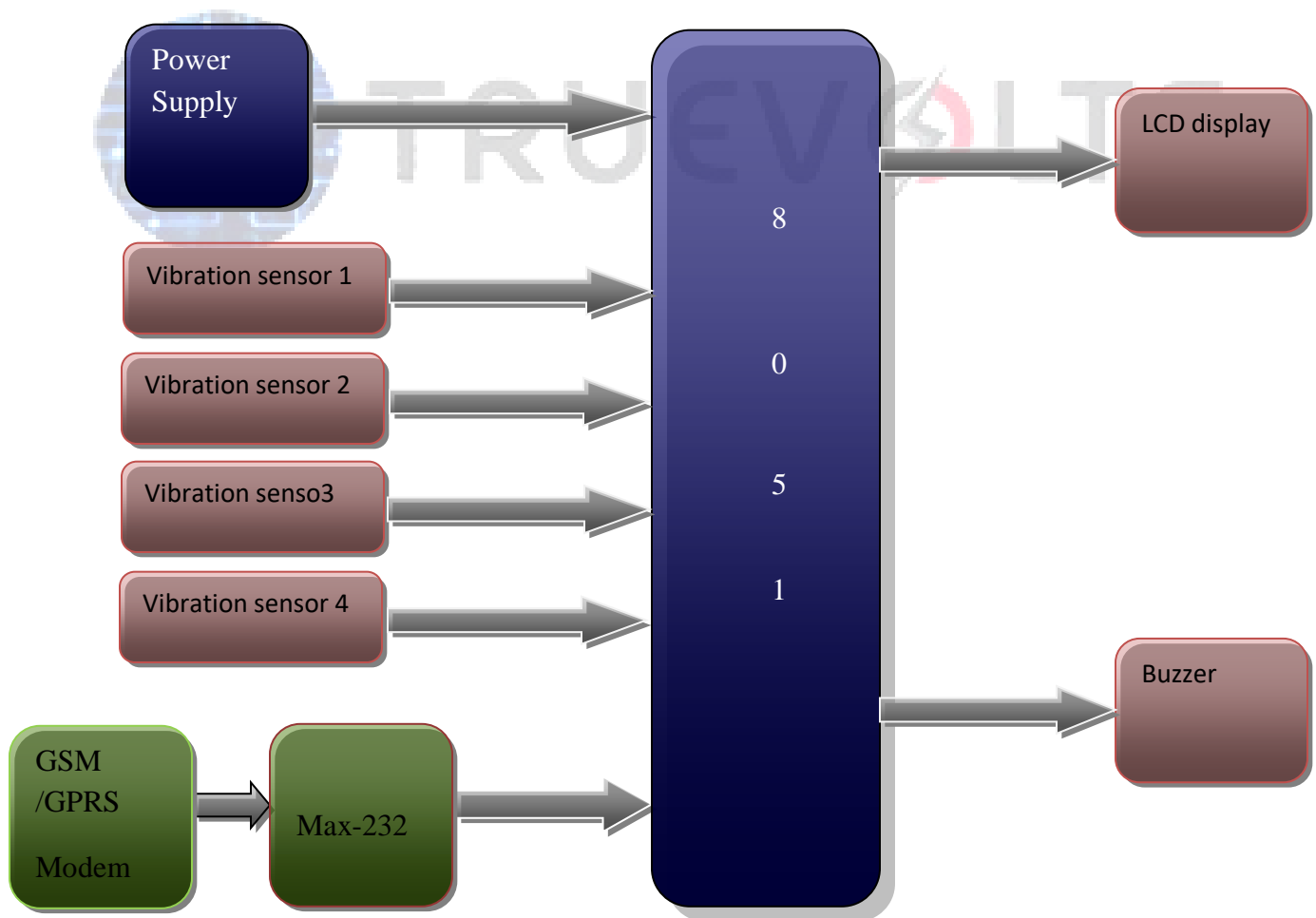
will be interfaced to the controller for alert. A 16X2LCD will be interfaced to the controller for displaying the status of the sensor.

This project uses regulated 5V, 500mA power supply. 7805 three terminal voltage regulator is used for voltage regulation. Bridge type full wave rectifier is used to rectify the ac output of secondary of 230/12V step down transformer.

APPLICATIONS:

- Transports
- Railway departments
- Public purpose

BLOCK DIAGRAM:



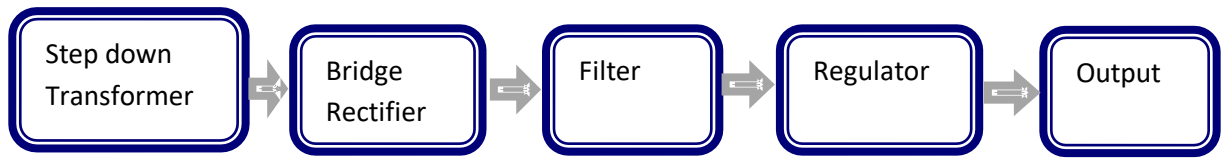
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POWER SUPPLY BLOCKDIAGRAM:



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