WIRELESS DATA LOGGER USING RF COMMUNICATION

ABSTRACT

The project is aimed to design a data logger system using which the physical parameters such as temperature, humidity, fire and light can be monitored. RF technology will be used in this project for wireless communication as it is reliable and can be applicable for long distance communication.

This project uses wireless communication,RF. RF has the advantages of fast communication for longer distances and reliability. The RF modules used here are STT-433 MHz Transmitter along with an RF encoder HT12E, STR-433 MHz Receiver along with an RF decoder HT12D.

The project is designed in such a way that we will interface a temperature, fire, humidity and light sensors to an 8 bit microcontroller 8051, on the transmitter side. And the RF transmitter is also interfaced to the controller through an RF encoder to encode the data received by the controller. Hence the encoded data will be transmitted by the transmitter over the medium and will be received by the RF receiver which will be interfaced to the controller through an RF decoder, on the receiver side. The RF decoder is used to decode the received data into a 4 bit digital data which will be fed to the controller. So now the controller will perform the predefined tasks by monitoring the received decoded data. Here an LCD will be interfaced to the controller to display the corresponding data regarding the status of the sensors and a buzzer for an audio indication of any sensor activation.

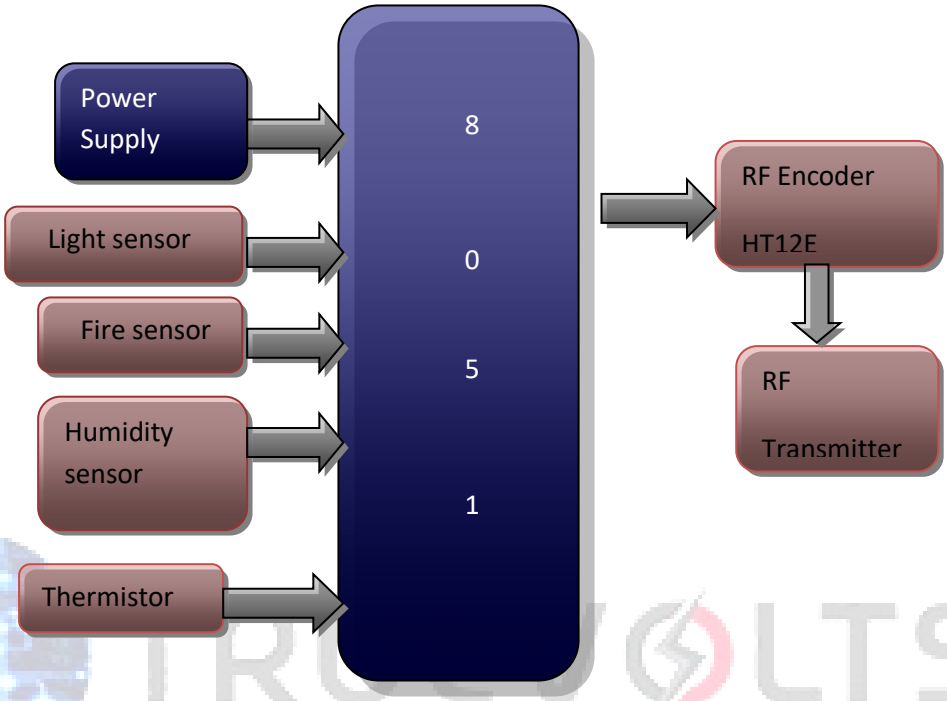
This project uses regulated 5V, 500mA power supply. 7805 three terminal voltage regulator is used for voltage regulation. Full wave bridge rectifier is used to rectify the ac output of secondary of 230/12V step down transformer.

APPLICATIONS:

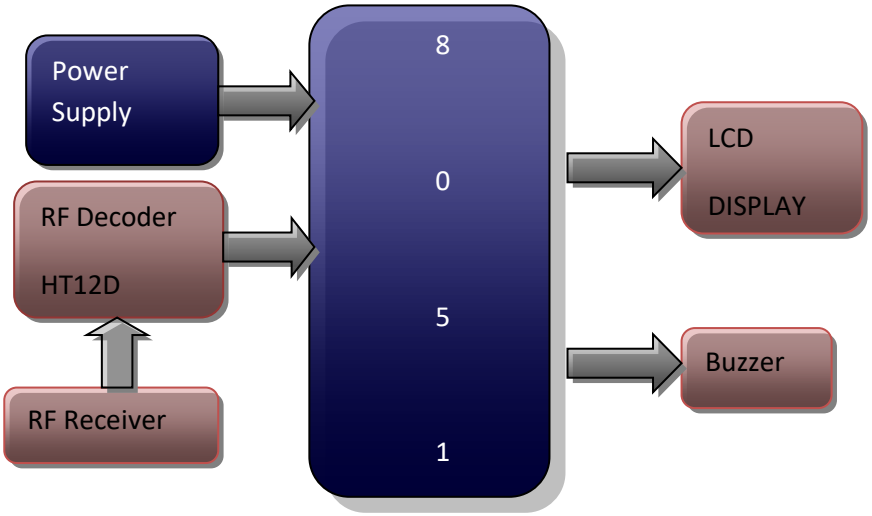
- Industrial applications
- Household applications

BLOCK DIAGRAM:

TRNSMITTER SECTION:



RECEIVER SECTION:



A1, 2nd FLOOR, EUREKA COURT, KS BAKERY BUILDING, OPP. R.S.BROTHERS LANE, AMEERPET, HYDERABAD,TELANGANA-500073.

Call: +91 9908665239 email: info@truevolts.com

Website: www.truevolts.com

POWER SUPPLY BLOCK DIAGRAM: