ZIGBEE BASED WIRELESS ELECTRONIC NOTICE BOARD

ABSTRACT

Notice boards play a vital role mostly in educational institutions. The events, occasions or any news, which has to be passed to the students, will be written on the notice boards present in every floor in the colleges or schools. The present system is like, a person will be told the news and he has to update this news on all the notice boards present in the college or school. This will be seen mostly during the examination seasons.

The time table or the schedule of the exams has to be given to the students. This will be done by writing the details on the notice boards. But this process consumes a lot time to update the news on all the notice boards and there may be chances that the person responsible may commit some mistakes or he may be absent sometimes. So, this may create disturbances and the entire schedule may be disturbed. To avoid all these, Wireless Notice Board have been designed which completely eliminates the manual work.

ZIGBEE is a specification for a suite of high level communication protocols using small, low-power digital radios based on the IEEE 802.15.4-2003 standard for Low-Rate Wireless Personal Area Networks (LR-WPANs). ZIGBEE is targeted at radio-frequency (RF) applications that require a low data rate, long battery life, and secure networking. ZIGBEE protocols are intended for use in embedded applications requiring low data rates and low power consumption. ZIGBEEs current focus is to define a general-purpose, inexpensive, self-organizing mesh network that can be used for industrial control, embedded sensing, medical data collection, smoke and intruder warning, building automation, home automation, etc. The resulting network will use very small amounts of power.

The project will be designed in such a way that an XBEE transceiver will be interfaced to the PC through a serial line driver IC MAX232, to transmit the data received by the keyboard. At the receiving end, the controller will be interfaced to the LCD and an other XBEE transceiver.

The transceiver receives the data coming from the transmitter and the same data will be fed to the microcontroller . The controller sends this data to the display unit and thus the message given by the user at the transmitter end will be displayed on 16X2 LCD display.

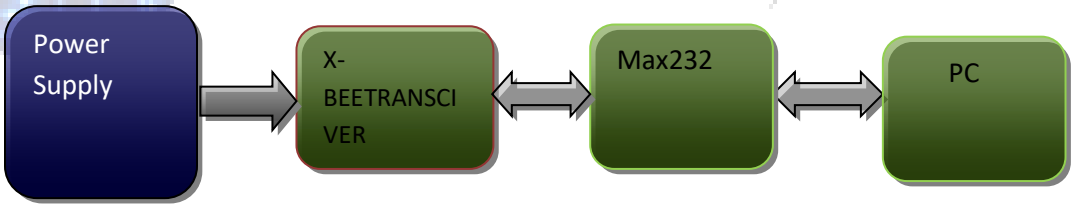
This project uses regulated 5V, 500mA power supply. 7805 three terminal voltage regulator is used for voltage regulation. Full wave bridge rectifier is used to rectify the ac output of secondary of 230/12V step down transformer.

APPLICATIONS:

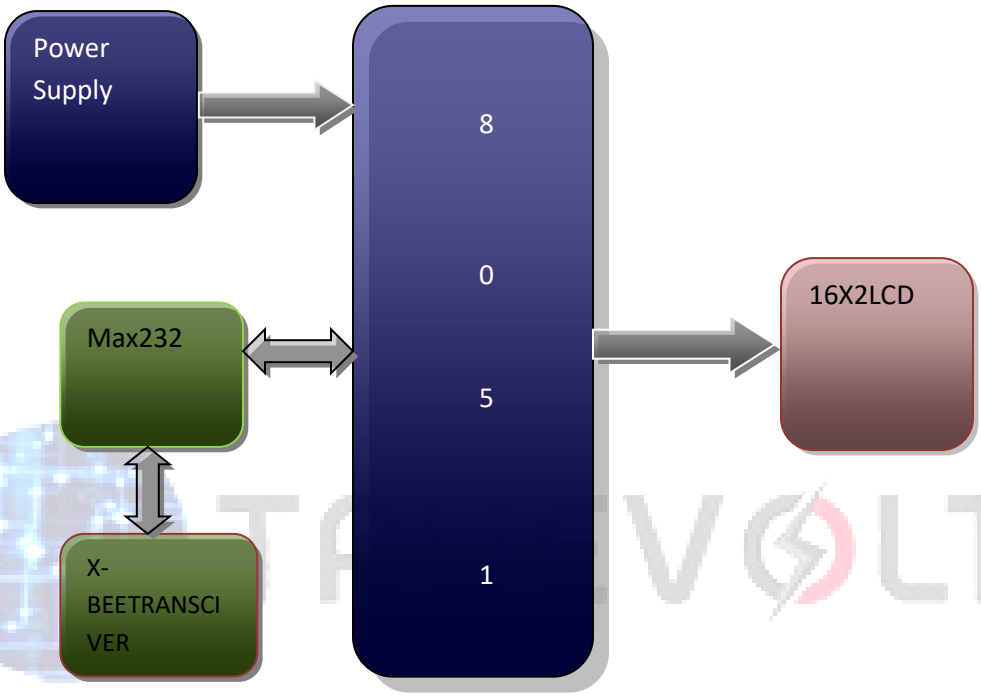
- Shopping malls
- Public purpose
- Commercial

BLOCK DIAGRAM:

Transmitter:



Receiver:



POWER SUPPLY BLOCKDIAGRAM: