

## Wireless Electronic Notice Board with Multi Point Receivers using ZigBee Communication System

### **IEEE Reference:**

### **Highly Reliable Wireless Communication System for point to multi point communication on ZigBee Network**

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Title of the project	:	Wireless Electronic Notice Board
Domain	:	Wireless Communication
Software	:	Embedded C, Keil, Proload
Microcontroller	:	AT89S52
Power Supply	:	+5V, 750mA Regulated Power Supply
Display	:	LED 5mm
Crystal	:	11.0592MHz
Communication Device	:	Zigbee Module
Applications	:	Colleges, Schools, offices, public utility places,
Developed By	:	M/S Wine Yard Technologies
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[www.WineYardProjects.com](http://www.WineYardProjects.com)

## ABSTRACT

Notice Board is primary thing in any institution / organization or public utility places like bus stations, railway stations and parks. But sticking various notices day-to-day is a difficult process. A separate person is required to take care of this notices display. This project deals about an advanced hi-tech wireless notice board.

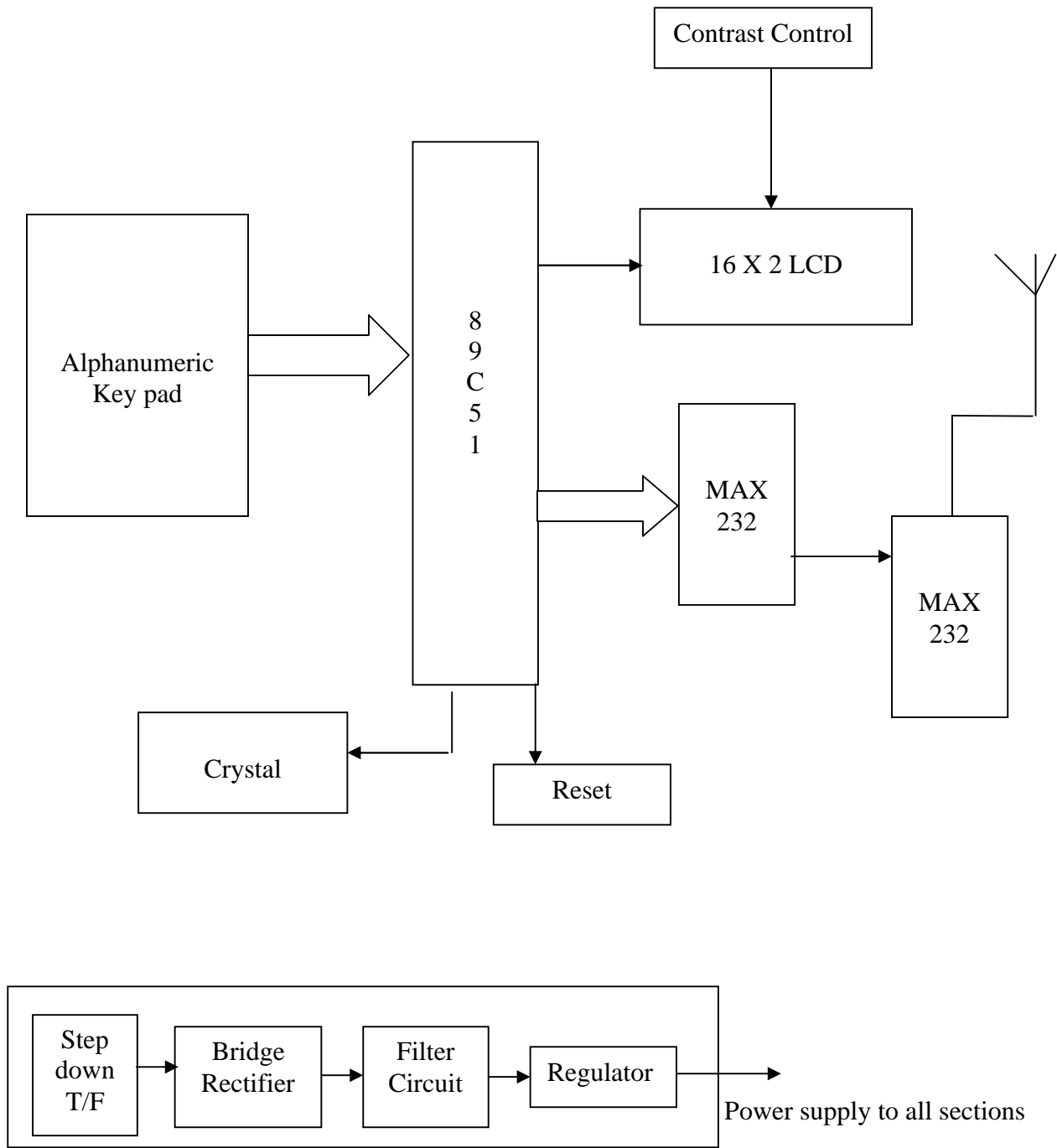
Zigbee is a PAN technology based on the IEEE 802.15.4 standard. Unlike Bluetooth or wireless USB devices, ZigBee devices have the ability to form a mesh network between nodes. Meshing is a type of daisy chaining from one device to another. This technique allows the short range of an individual node to be expanded and multiplied, covering a much larger area.

The project is built around the AT89C51 micro controller from Atmel. This micro controller provides all the functionality of the display and wireless control. It also takes care of creating different display effects for given text.

Alphanumerical keypad is interfaced to the transmitter to type the data and transmit. The message can be transmitted to multi point receivers. After entering the text, the user can disconnect the keyboard. At any time the user can add or remove or alter the text according to his requirement.

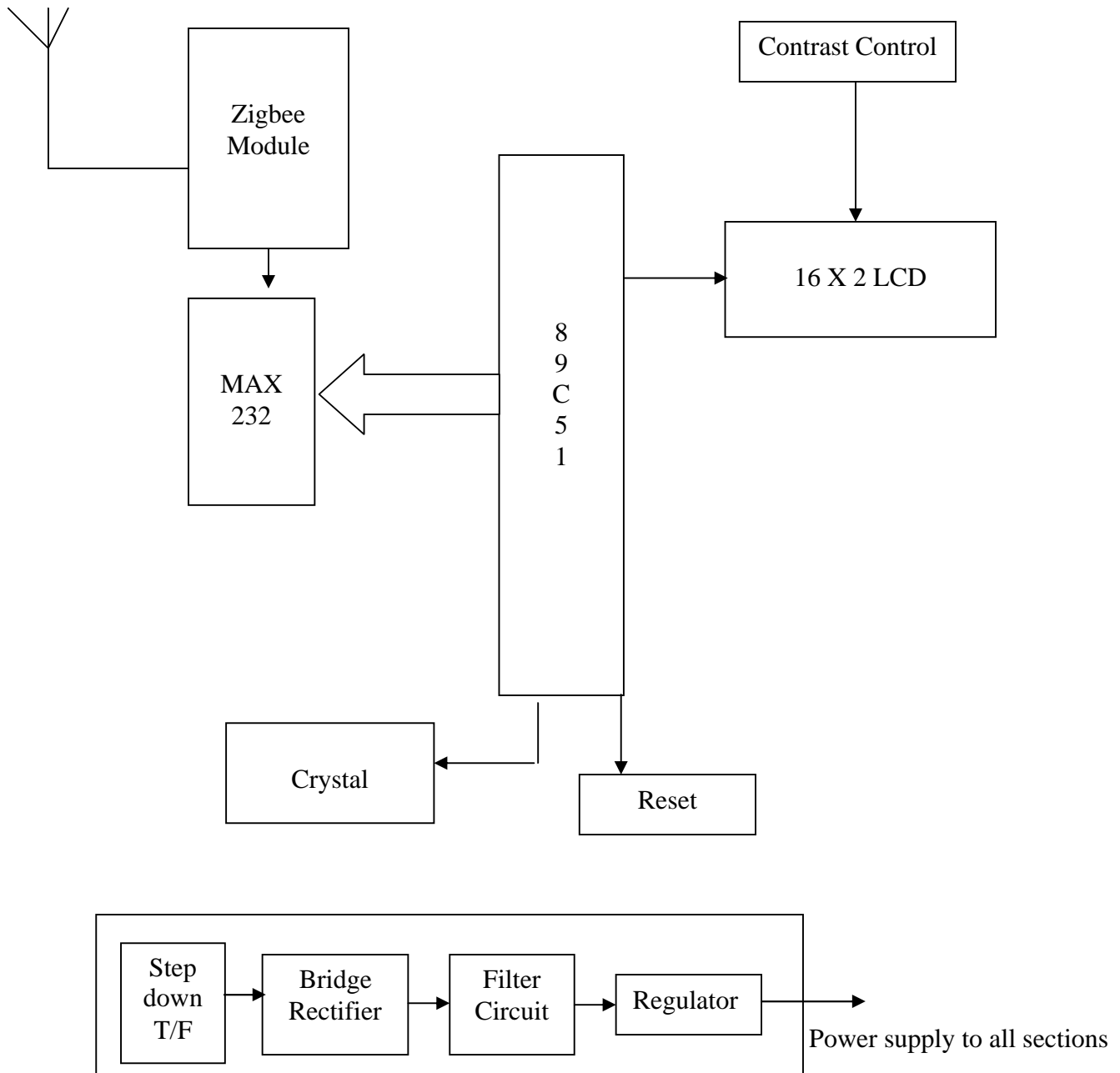
This project uses regulated 5V, 1A power supply. 7805 three terminal voltage regulator is used for voltage regulation. Bridge type full wave rectifier is used to rectify the ac out put of secondary of 230/12V step down transformer.

Block Diagram - Transmitter





Block Diagram - Receiver



Advantages:

Wireless System

Text can be entered from remote place

Data will not be lost in power failure condition

Applications:

Offices, educational institutions, bus stations, railway stations and other public utility places