

Message Displayed on LCD Screen using GSM and Bluetooth Technology

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Abstract: In today's words displaying message and advertisement is an important part of communication as well as advertisement so here I am trying to display message with smart phone or in form of message. Here the message which is displayed on LCD screen is much authenticated. In this I am using two different technology, GSM and Bluetooth technology for displaying message on LCD screen. Here the main part is Microcontroller 8051. The microcontroller is interfaced with GSM Modem via MAX232 level convertor. It is used to convert RS232 voltage levels to TTL voltage levels and vice versa. The hardware also has a 64K EEPROM chip AT24C64. This EEPROM is used to store the timings and messages to be displayed.

Keywords: Microcontroller, Bluetooth, Buzzer, LCD screen, Power Supply, Rectifier, message centre, 64K EEPROM, MAX232.

I. INTRODUCTION

Now a days, Wireless communication has announced its arrival on big stage and the world is going with smart phone technology. We want to control everything and without moving an inch. This remote control of appliances is possible through Embedded Systems. The use of "Embedded System in Communication" has given rise to many interesting applications that ensures comfort and safety to human life. Here a 16x2 LCD display attached and by using smart phone and blue tooth technology we are displaying secure messages on LCD screen. Here we are two part on the one hand sender part and on the other hand there is receiving part. This LCD screen will be used to display the messages /advertisements by Smart phone with using GSM and Bluetooth technologies. A 16x2 Character LCD display is attached in byte mode to port 1 of microcontroller. This display will be used to display the messages /advertisements. Microcontroller coding will be done using Embedded C and Kiel

side there is Receiver.transmitting part consist the mobile unit while the receiving part there is GSM modem which is interfaced with microcontroller and RS 232 and also computers serial port. At last microcontroller finally displays the message on LCD screen.

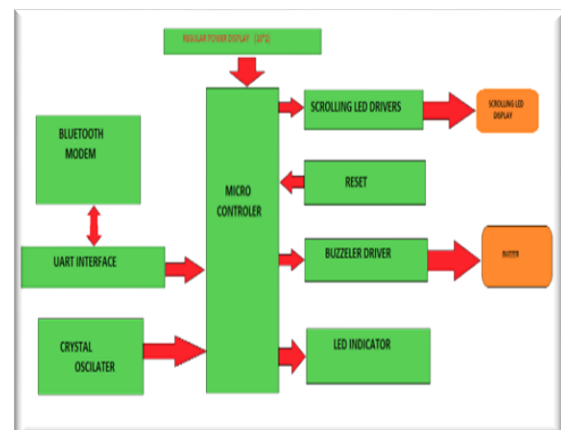


Figure 1

II. BLOCKDIAGRAM

[1]While using Bluetooth technology:

Here in the following figure there is the block analysis when we are using Bluetooth technology for displaying our message. Here the main controlling device is Microcontroller. Buzzer and LCD screen display are interfaced with microcontroller. The message is send from smart phone. The smart phone uses the application which is made for particular task by any developer. Here the Blue tooth modem fetch the message and sends it forward to the display board.

[2]While using GSM technology:

In case of GSM technology, It is widely used and also very easy to use. Here as per following figure it has mainly two part. On the one side there is Transmitter and On the other

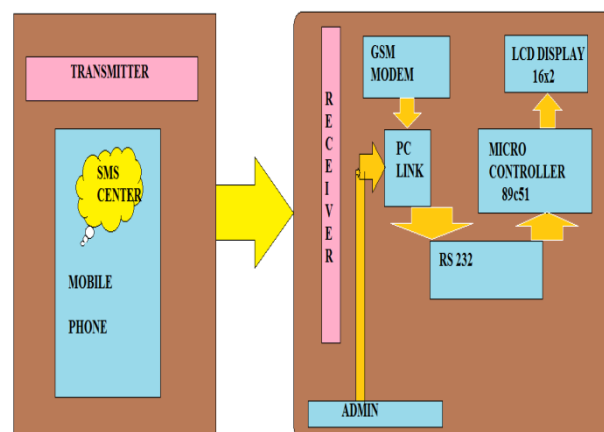


Figure 2

III. HARDWARE

[1] Microcontroller:

It is the commonly used in both GSM as well as Bluetooth technology. the pin diagram of microcontroller is consist 40 pins.

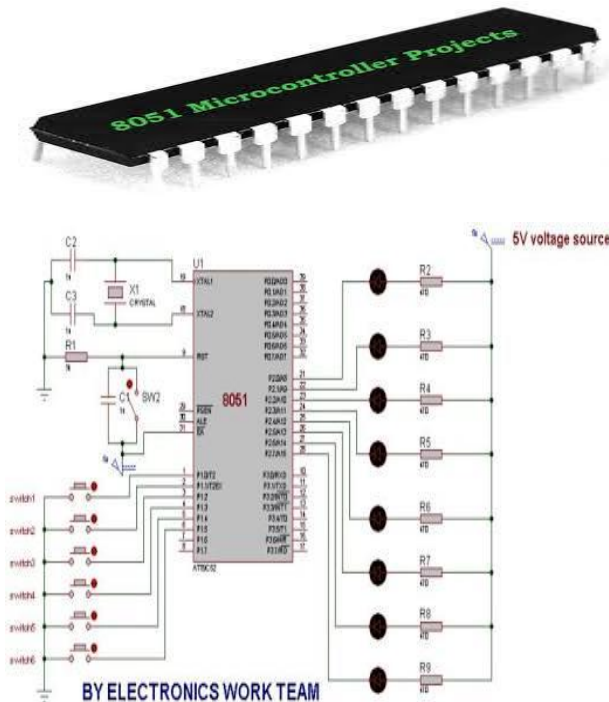


Figure 3

[2] LCD screen or Display unit (16x2):

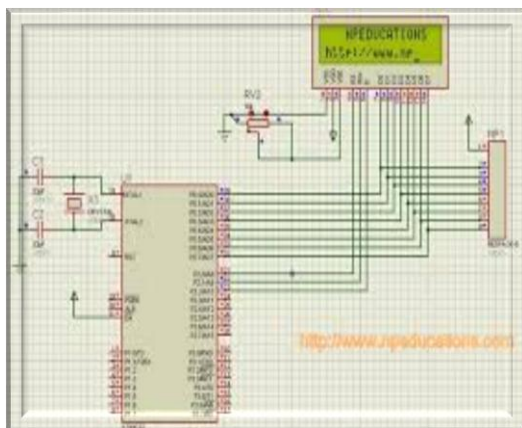


Figure 1

It is the commonly used in both GSM as well as Bluetooth technology. the interface diagram interfaced with the main parts like microcontroller, buzzer, RS 232

[3] Android application and Buzzer

Here when we are using Bluetooth technology in the wireless message displaying at that time the smart phone is primary necessary and the application is key word. The smart phone which having Android operating system we have to programming our application in the C language or java.

[4] MAX 232

While we are using GSM based technology at that time MAX 232 is very useful as a voltage converter. It consist 16 pins and the pin diagram is like



Figure 5

[5] POWER SUPPLY

Here in both case the requirement of power supply is same. Power Supply is an important part of a circuit. It provides required supply to different blocks of the circuit from input 230 VAC. The main blocks include transformer, rectifier circuit, filter circuit, and regulator circuit. Voltage regulator IC LM7805 is used as a voltage regulator

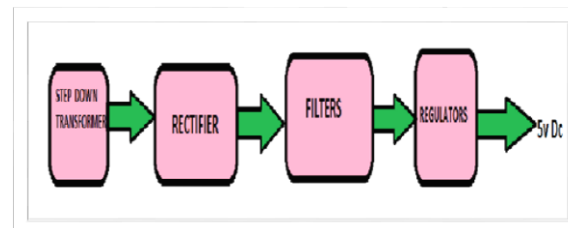


Figure N

IV. ADVANCEMENT & APPLICATION

- [1] Wireless technology
- [2] Restaurants: to display the menu, offers
- [3] Easy to operate
- [4] Low cost
- [5] Scrolling the Message

APPLICATION:

- [1]Colleges:for displaying important notice
- [2] High security
- [3]Hotels:display the availability of room
- [4]Hospital : availability of Doctors.
- [5]Railway station: schedule of all.

V. CONCLUSION

By introducing the concept of wireless technology in the field of communication we can make our communication more efficient and faster, with greater efficiency we can display the messages and with less errors and maintenance. In addition to user can send the message for any location to the notice board. For new applications every time we need to write the manually message to the of text box.

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