

## DTMF BASED HOME AUTOMATION

### DESCRIPTION:

The project is aimed to design a system using which the devices can be controlled wirelessly in a home or in industry by using DTMF technology.

In this project we can control the devices at homes or industries from our mobile without any contact. For this we are using DTMF [Dual Tone Multi Frequency] technique which is an in built feature to few mobiles. This project is designed in such a way that the Industrial or home devices are interfaced to the microcontroller [8051] through the relays along with one mobile which supports DTMF by using DTMF decoder. A normal mobile phone will be used as a remote control. A call is established between the controlling mobile and the remote mobile. Now any key pressed on the remote mobile will generate a complex frequency, which can be heard on the mobile placed. That frequency can be detected by controller by means of DTMF decoder. Keys assigned for control can be User Defined. Depending on the keys pressed the micro controller will turn ON/OFF the devices which are connected through relays.

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.

## TECHNICAL SPECIFICATIONS:

### HARDWARE:

Micro controller : AT89X series

Crystal : 11.0592 MHz

LCD : HD44780

Relays

Loads

DTMF decoder

Mobile

### SOFTWARE:

Keil micro vision

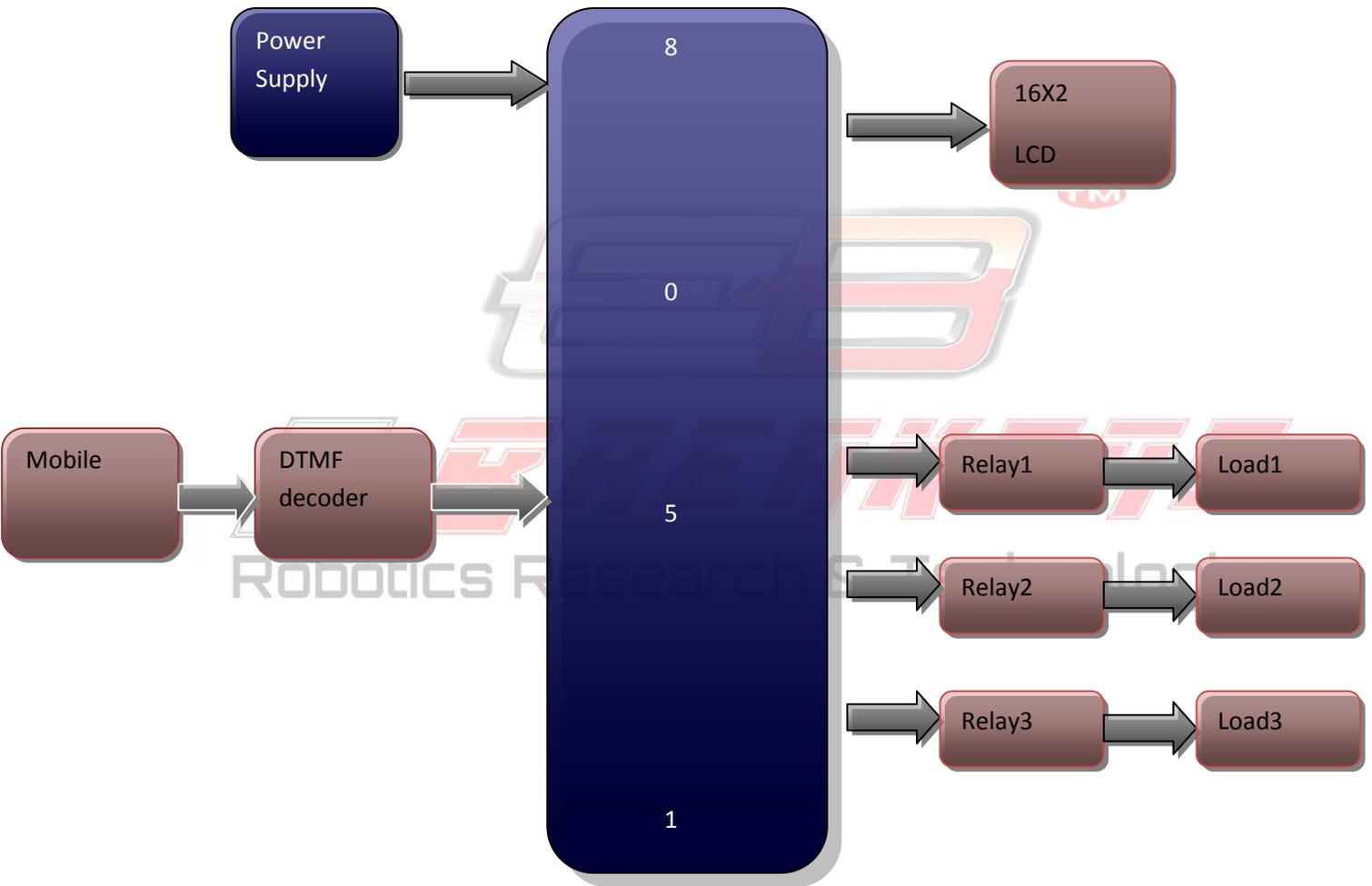
Proteus

UC flash

### APPLICATIONS:

- Industrial applications
- Home automation

**BLOCK DIAGRAM:**



**POWER SUPPLY BLOCK DIAGRAM:**

