

DTMF Based Home Automation

Abstract

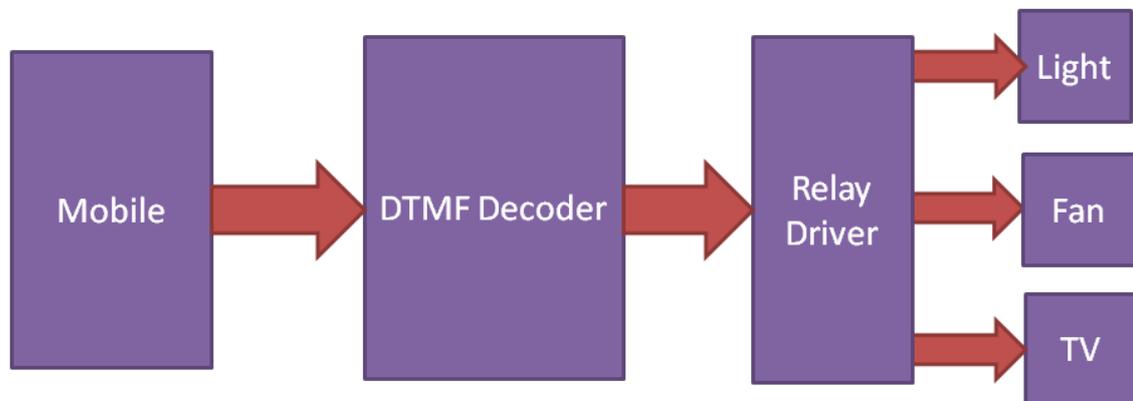
There are two types of communication that is we generally use - one is wired and other one is wireless. In wireless communication we transmits signal wirelessly, like using radio frequency (RF) and in wired communication in which we uses wires like copper wire. In this project “**DTMF Based Home Automation System**” we are going to control our home appliances wirelessly. Other important feature of this project is that we are not going to use any microcontroller in it.

Introduction

DTMF is a short form of Dual Tone Multi Frequency. So, when you make a call to a customer care, they will ask you to press any number. When you press any number from your mobile, one particular action takes place because of dual tone multi frequency. When a button is pressed from the mobile keypad, the act immediately generates a tone of two frequencies. These tones are called column and row frequencies.

The column frequencies are high frequencies, and the row frequencies are low frequencies. These row and column frequencies are selected for DTMF in such a way that they don't have harmonic relation with the others. As a result, they will not generate same tones. The row frequencies are somewhat lower than the column frequencies.

Block Diagram



Component

1. MT8870 DTMF Decoder
2. ULN2003
3. Relay 5 volt
4. Bulb with holder or LED
5. Connecting wires
6. Bread board
7. Aux Wire
8. 9 volt battery
9. PVT or Terminal Block
10. 100K Resistor
11. 330K resistor
12. 0.1 uf Cap
13. 22 pF cap
14. 3.57 Mhz Crystal
15. Mobile phone
16. LEDs
17. 1K resistor
18. 7805

Advantages

- It can be controlled from anywhere.
- It decreases wastage of electricity when anyone forgets to switch off the fans and lights.
- Its cost is very low compare to other technologies like GSM.