

## **Construction of Smart mobile phone with driving mode selection to avoid accidents**

The main aim of the project is to design a low cost smart phone with driving mode and sleep mode options. Whenever the user sets his mobile phone with mode options according to his requirement, then the system automatically manages the incoming phone calls. This system cut the call and sends SMS message to the caller as the user is under driving mode or under busy mode. This feature helps in avoiding the unnecessary calls (like customer care etc.), also avoids accidents when the user diverts from driving the vehicle.

The GSM modem provides the communication mechanism between the user and the microcontroller system by means of SMS messages. It is capable of receiving a set of command instructions in the form of Short message service and performs the necessary actions. We will be using a dedicated modem at the receiver module i.e. and send the commands using SMS service as per the required actions.

Control buttons are used to control the operation. In this project we are using control buttons for the user to choose the mode in which the mobile phone should operate whether the user wants to be under driving mode or sleep mode or wants to receive a call etc. Using control buttons we can select the particular mode of operation of the mobile phone.

In this project we are making use of GSM modem for communication purpose. We also use the LCD for display purpose. This LCD displays call related information. It also provides the facility to make and receive the calls using a numeric keypad.

This project can be developed as a mobile phone with the help of GSM modem based keypad, graphical LCD. By this we can completely design our smart phone with different mode options.

**Features:**

1. It can automatically send SMS messages based on the preset conditions.
2. It can receive SMS messages and send the reply automatically to predefined numbers.
3. Make and receive calls by using a numeric keypad.
4. It automatically manages the incoming phone calls. This feature helps in avoiding the unnecessary calls (like customer care etc.), also avoids accidents when the user diverts from driving the vehicle.

**Advantages:**

1. GSM based user-friendly interfacing.
2. Low power consumption.
3. Long life.
4. Highly sensitive.
5. Low cost.

**This project provides exposure to the following technologies:**

1. GSM modem.
2. Interfacing GSM modem and microcontroller.
3. Embedded C programming.
4. Design of PCB.
5. LCD interfacing.
6. Operation of GSM modem with the help of commands.

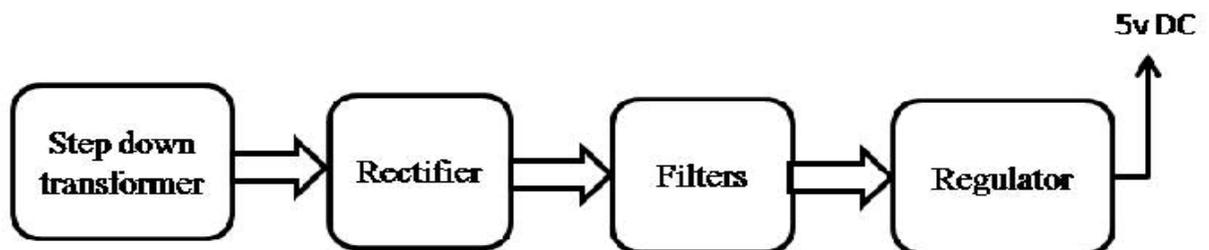
**The major building blocks of this project are:**

1. Regulated Power Supply for Microcontroller and Modem.
2. GSM modem.
3. Microcontroller based control system.
4. LCD display.
5. Crystal oscillator.
6. Reset.
7. LED indicators.

**Software used:**

1. PIC-C compiler for Embedded C programming.
2. PIC kit 2 programmer for dumping code into Micro controller.
3. Express SCH for Circuit design.
4. Proteus for hardware simulation.

**Regulated Power Supply:**



**Block diagram:**

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