# VEHICLE TRACKING AND SECURITY SYSTEM USING GPS AND GSM

In this modern, fast moving and insecure world, it is become a basic necessity to be aware of one's safety. Maximum risks occur in situations wherein an employee travels for money transactions. Also the Company to which he belongs should be aware if there is some problem. There is a real necessity in designing a system that can track the vehicle and send the information about the vehicle to the concerned person.

The system that functions as a tracking and a security system has been designed that uses two main underlying concepts. These are GPS (Global Positioning System) and GSM (Global System for Mobile Communication). This system can deal with both pace and security. The VMSS (Vehicle Monitoring and Security System) is a GPS based vehicle tracking system that is used for security applications as well.



The main application of this system is tracking the vehicle to which the GPS is connected, giving the information about its position whenever required and for the security of each person travelling by the vehicle. This is done with the help of the GPS satellite and the GPS module attached to the vehicle which needs to be tracked.

The Global Positioning System (GPS) is a satellite-based navigation system made up of a network of 24 satellites placed into orbit by the U.S. Department of Defense. GPS was originally intended for military applications, but in the 1980s, the government made the system available for civilian use. GPS works in any weather conditions, anywhere in the world, 24 hours a day.

The GPS antenna present in the GPS module receives the information from the GPS satellite and it reveals the position information. This information received from the GPS antenna is sent to the controlling station where it is decoded. Thus, the complete data related to the vehicle is available at the controlling unit. This information is sent to the owner or to the concerned person using a GSM modem. This GSM modem has an antenna too. The information about the vehicle can also be displayed on LCD.

In this prototype model step-down power supply circuit is used. First from 230Volts AC is converted as 12V AC by using a step-down transformer. Then a 1000uf capacitor is used to convert it to pure 12V DC. 7805 will convert the 12V DC supply to 5V DC along with a 100uf capacitor. This 5V DC is used for all components like microcontroller, inputs and outputs.

**BLOCK DIAGRAM**