

SMART VEHICLE SHIELD

ABSTRACT

‘Smart vehicle shield’ is a low cost security system for vehicles. Its use is highly observable in vehicles that are parked. Vehicle theft is a major risk faced by lonely parked vehicles. In order to prevent that, we need a highly efficient security system that is adaptable for any vehicle. There comes the importance of the ‘smart vehicle shield’.

It mainly has three portions along with it. First one is an IR remote which can control the whole security system. IR remote is used by the owner of the vehicle to switch ON/OFF the security system.

Second one is an internal part consisting of piezo buzzer. It senses any disturbance occurring on the parked vehicle. Piezo buzzer senses the variation in the pressure. It is fitted to the shock absorber of the vehicle.

Third part consists of two alert systems. It generates an alarm and sends a wireless alert to the owner. Alarm which alerts the public nearby the vehicles is built around a sound IC (UM 3561). It uses frequency modulation and demodulation technique for sending wireless alert to the user. For this purpose an FM transmitter is placed inside the vehicle. Any conventional FM receivers for example FM receiver in mobiles can be used by the owner to receive the wireless alert. The two alert systems start to work when any disturbance is sensed by the second part.

INTRODUCTION

It is a constant fear of vehicle owners that their valuable obsession is being stolen away by robbers when they park it somewhere. Right now only luxury vehicles have that much security systems in them, it is being unreachable for middle class to afford it.

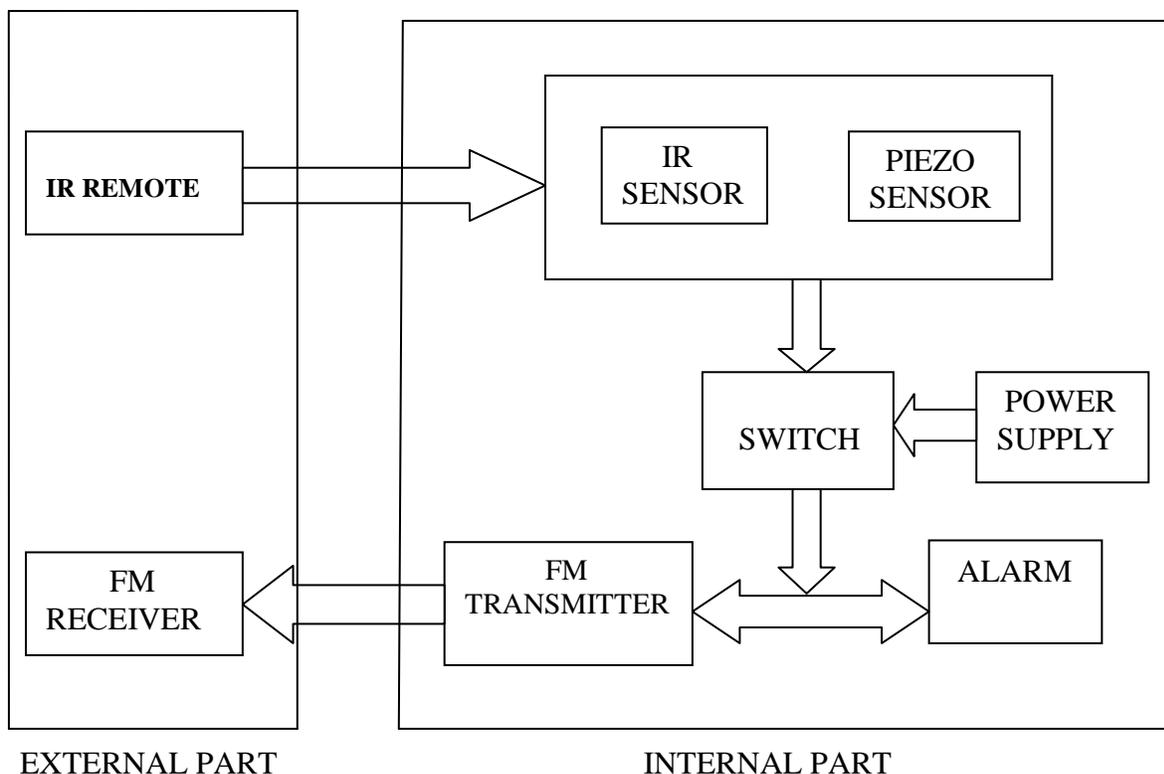
Here comes the application of ‘smart vehicle shield’. It provides efficient security with in low cost. It provides better security to the vehicles which are parked with out the attention of the owner. It is a simple and compact product that can be implemented in any vehicle.

Security is provided by sensing the pressure applied to the car. A piezo sensor is used for this purpose. Whole security system is controlled by an IR remote which is kept with the owner. Security system produces an alarm whenever there is any variation in pressure.

Another attractive feature of this product is that it sends a wireless alert to the owner whenever any one tries to steal the vehicle, So that the vehicle owner can sense the danger quickly. Frequency modulation and demodulation technique is used for producing wireless alert. No external power supply is required; power for the security system is taken from the vehicle's battery itself.

BLOCK DIAGRAM

Block diagram of 'smart vehicle shield' is given below. Main parts of it outside the vehicle are IR remote and FM receiver. Parts of it inside the vehicle are IR sensor, piezo sensor, FM transmitter and alarm.



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