International Journal on Recent and Innovation Trends in Computing and Communication ISSN: 2321-8169
Volume: 4 Issue: 4 475 - 478

Smart Women Safety System

Minal Ambhore[1], Pooja Lavhat[2], Suprabha Pawar[3], Anish Kanaujiya[4]

[1, 2, 3, 4] *Student, Department of EXTC Engg. Vishwatmak Om Gurudev College of Engineering, Mumbai University, Mumbai, India*

[1] *minalambhore@gmail.com,* [2] *poojalavhat1994@gmail.com,* [3] *suprabha.p10@gmail.com,* [4] *anishkanaujiya@gmail.com*

Abstract :- Ladies' security is a basic issue in this day and age and it's especially required for each person to be acting over such an issue. This paper depicts a "GPS, GSM and Zapper Circuit based ladies security framework" that gives the mix of GPS gadget particular to track the area and in addition give alarms and messages a crisis catch trigger. It additionally contains stun instrument to create non-deadly electric stun in crisis circumstance. Our try behind this paper is to outline and create a device which is so conservative in itself that give favorable position of disguise. The fundamental point of interest of this framework is that the client does not require a Smartphone dissimilar to different applications that have been created before. The gadget furnishes with all the elements which will investigate every possibility to help the trick in any sort of crisis circumstances. The device additionally contains human services framework for patients and the individuals who required basic consideration. In this paper we give key purposes of the device and its application in threat time.

Keywords- *GPS (Global Positioning System); GSM (Global System for Mobile communication); Zapper circuit. Buzzer.*

*****

I. INTRODUCTION

Ladies everywhere throughout the world are confronting much unscrupulous physical provocation. Ladies and young ladies experience and dread different sorts of sexual viciousness openly spaces, from lewd behavior to rape including assault and feticide. It happens on boulevards, open transport and stops, in and around schools and work environments, out in the open sanitation offices and water and sustenance conveyance locales, or in their own particular neighbourhoods.

Assault and brutality against ladies are among the most under-reported violations overall on account of the social shame appended to the way of the wrongdoing.

Proposed Design

The proposed framework is to plan a compact gadget which looks like a typical belt. It comprises of Microcontroller, GSM/GPS modules, Screaming caution and Zapper Circuit. At the point when the trigger is squeezed, the gadget will get initiated consequently. Quickly the area of the casualty will be followed with the assistance of GPS and crisis messages will be sent to contacts and one to police control room at regular intervals with upgraded area. The shouting caution unit will be initiated and will convey sirens to get out for help. The framework is additionally fit to produce an electric stun to hurt the assailant which may help the casualty to get away.

II. LITERATURE SURVEY

The gadget descried here is a self-preservation framework uncommonly intended for ladies in trouble to help them to secure themselves. This gadget can be fitted in a handbag or belt or fitted and the frenzy catch joined to the belt. The woman in risk can enact the framework by squeezing crisis catch on belt or tilting her shoe. It is a basic and simple to convey gadget with extensive variety of elements and usefulness. [2]

The essential methodology is to personal moment area and a misery message to the cops and enrolled number like guardians, companions, media, and ladies cell and so forth so that tragic episodes would be deflected and to give continuous proof to quick activity against the culprits of wrongdoing against ladies. [4]

The microcontroller goes about as an installed processing framework and controls the exercises of all the sub-frameworks. It is interfaced with Emergency Switch, GPS Receiver, GSM Modem, Buzzer, High Voltage Shock Circuit. The microcontroller occasionally screens the status of current spot furthermore continues checking. On the off chance that the parameters are typical and if the Emergency Switch is not squeezed, it does a reversal on the up and up and proceeds with standard observing procedure. Be that as it may, if the Emergency Switch is observed to be squeezed, it actuates the discourse circuit to make boisterous yelling sound to get the consideration of the close-by individuals for help. It likewise readies the High Voltage Electric Shock Circuit to be prepared to give a non-deadly stun to the aggressor. [5]

In the event that the assistance is not accessible and if the framework is not reset inside the stipulated time, acquire area data from the GPS and set up a content SMS containing the present area data and send SMS through GSM modem to the police control room and misery message to the pre-modified portable number.[6]

The configuration is actualized utilizing an inserted microcontroller, in a particular structure to be versatile to various sorts of area following. Taking into account the aggregate outline of the framework, the equipment and programming of the framework is intended to be close ongoing checking of the ladies and prompt help. The woman can ensure herself by the electric stun to the individual annoying her. The product is created in low level computing construct to exhibit the framework capacity in giving continuous reaction. . Utilizing the area data supplied by this framework the area utilizing GPS and traceable through Google Maps. In this way the young lady will be sheltered and she feels ensured. At the item level it can be as conservative as a portable phone.[7]

III. PROPOSED IMPLEMENTATION-

Block Diagram of Women Safety System

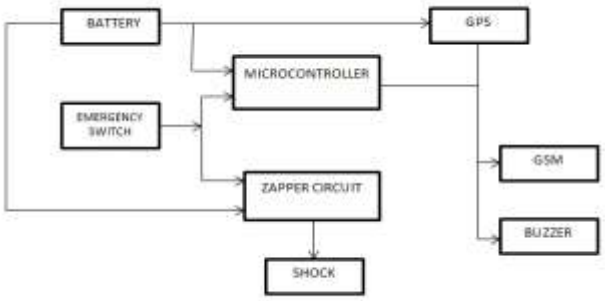


Fig 3.1 Block Diagram

Description

Fig.3.1.shows the block diagram of complete architecture of Women safety system.This System is implemented using micro-controller which will set the commands to Electro-shock circuit as well as GSM module. Switches will be used to activate the system i.e. micro-controller. Electro-shock circuit is a designed to function as a shock weapon that momentarily disable or incapacitates the attacker. Connection of Electro-shock circuit with the battery source in the system is made via relay. GSM module communication is achieved with the help of AT-commands. In case of emergency, a panic button provided in this system will send SOS message to all the trusted contacts immediately. Same time buzzer will get on and make noise for help.

Hardware-

1. Microcontroller AT89S52-

The AT89S52 is a low-control, superior CMOS 8-bit microcontroller with 8K bytes of in-framework programmable Flash memory. It detects all the info parameter. The AT89S52 gives the accompanying standard elements: 8K bytes of Flash, 256 bytes of RAM, 32 I/O lines, Watchdog clock, two information pointers, three 16-bit clock/counters, a full duplex serial port, on-chip oscillator, and clock hardware. Furthermore, the AT89S52 is planned with static rationale for operation down to zero recurrence and backings two programming selectable force sparing modes.

2. LCD Display-

Fluid gem Display (LCD) shows temperature of the deliberate component, which is ascertained by the microcontroller. CMOS innovation makes the gadget perfect for application close by held, convenient and other battery direction with low power utilization.

GENERAL SPECIFICATION: Drive strategy: 1/16 obligation cycle Display size: 16 character * 2 lines Character structure: 5*8 dabs. Show information RAM: 80 characters (80*8 bits) Character create ROM: 192 characters Character produce RAM: 8 characters (64*8 bits) both showcase information and character generator RAMs can be perused from MPU. Interior programmed reset circuit at force ON.

3. GSM –

This is a fitting and play GSM Modem with an easy to interface serial interface. Use it to send SMS, make and get calls, and do other GSM operations by controlling it through basic AT orders from smaller scale controllers and PCs. It utilizes the very well known SIM300 module for every one of its operations. It accompanies a standard RS232 interface which can be utilized to effortlessly interface the modem to miniaturized scale controllers and PCs. The modem comprises of all the required outer hardware required to begin exploring different avenues regarding the SIM300 module like the force control, outside reception apparatus, SIM Holder, and so on. The SIM300 permits a flexible serial baud rate from 1200 to 115200 bps (9600 default).Modem a low power utilization of 0.25.

4.GPS-

A GPS following unit is a gadget, regularly conveyed by a moving vehicle or individual, that uses the Global Positioning System to decide and track its exact area, and consequently that of its transporter, at interims. The recorded area information can be put away inside the following unit, or it might be transmitted to a focal area information base, or Internet-associated PC, utilizing a cell (GPRS or SMS), radio, or satellite modem inserted in the unit. This permits the benefit's area to be shown.

5. Zapper circuit-

The circuit creates a high-voltage beat by charging various capacitors in parallel, then all of a sudden interfacing them in arrangement.

The guideline of increasing voltage by charging capacitors in parallel and releasing them in arrangement is likewise utilized as a part of the voltage multiplier circuit, used to create high voltages for laser printers and cathode beam tube TVs, which has likenesses to this circuit. The distinction is that

the voltage multiplier is fueled with exchanging current, and produces a relentless DC yield voltage, while the Marx generator creates a heartbeat.

6. Buzzer-

Buzzer or beeper is an audio signalling device, maybe mechanical, electromechanical or piezoelectric.

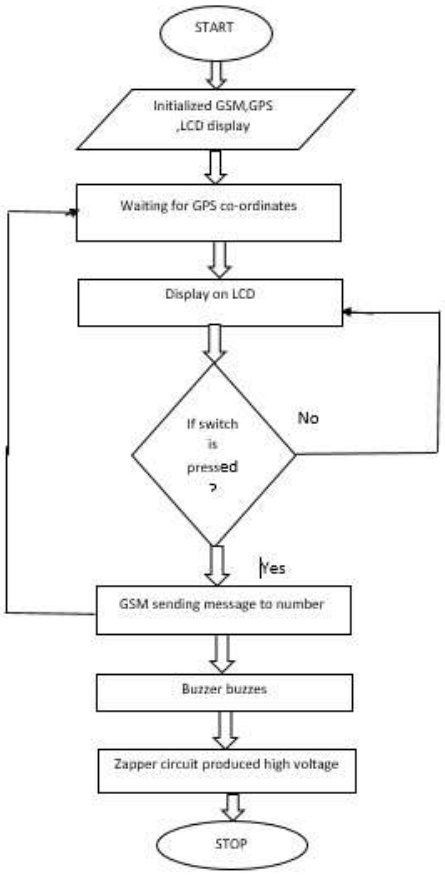
Typical uses of buzzers and beepers include alarm devices, timers and confirmation of user input such as a mouse click or keystroke.

Software used-

1 Keil software-

The Keil Software are use to compile your C code, assemble your assembly source files, link and locate object modules and libraries, create HEX files, and debug your target program. µVision for Windows™ is an Integrated Development Environment that combines paper management, source code editing, and program debugging in one single, powerful environment.

Flowchart-



Algorithm-

1. Define the receiver and transmitter pin number of GPS module.
2. Setup the serial buffer with baud rate 9600 and bit rate 4800.
3. Now setup a loop which will do the following
   a. Read the contact number from SIM card memory
   b. Take data from GPS module.
   c. Convert the longitude and latitude from GPS into an Goggle URL.
   d. Attach this URL with the emergency message.
   e. Send this message to all the numbers from SIM memory periodically until device is reset.

III. ADVANTAGES & APPLICATIONS

Advantages

1. This approach is used for women safety.
2. It is simple and practical.
1. 3.This device is portable and we can easily place it at anywhere.
3. This device is small in size and consumes less power.
4. Cost is comparatively low

Applications

1. Security surveillance monitoring.
2. Alert system useful in insecure environment

CONCLUSIONS

Women's security and safety is a critical and social issue in today's world. In this paper we have successfully concluded the women safety system. Here microcontroller is heart of the system. Battery is used to provide supply to the system. As soon as women press the emergency switch microcontroller and zapper circuit will get the signal. Zapper circuit will produce high volt at its ends. Where as GPS module collect the current location and send SMS through GSM module to the stored number. Same time buzzer will get on and make noise for help. It helps to supports the gender equality by providing safe environment to women in the society and allows to work them till late nights. The proposed design will deal with critical issues faced by women in the near past and will help to solve them with technologically sound equipments and ideas. This system can overcome the fear that frightens every woman in the country about her safety and security.

The crime (molestations, robbery, sexual assault, rape, domestic violence) against the women can be now brought to an end with the help of real system implementation of this proposed paper. This system can overcome the fear that scares every woman in the country about her safety and security.

References

[1] Nishant Bharadwaj and Nitesh Aggrwal, "Design and Development of "SURAKSHA"-A Women Safety Device", Department of Electronics and Communication ITM UNIVERSITY, Delhi, India.

[2] THOOYAVAN V, "ADVANCED SECURITY FOR WOMEN", Department of ECE Vidya Vikas College of Engineering and Technology Vasai, Thane, India.

[3] World Health Organisation, "Global and regional estimates of violence against women: prevalence and health effect of intimate partner violence and no partner sexual violence, Geneva: WHO (2013)".

[4] Francis Enejo Idachaba "Design of GSM/ GPS based tracker for the location of stolen items and kidnapped or missing person in NIGERIA" APRN Journal of Engineering and Applied Sciences VOL. 6, No. 10, October 2011.

[5] "Violence against women in India- a literature review"- Sheela Saravaranana, Institute of social studies trust.

[6] "A mobile application for women"- Times of India Dec 03 2013.