Stun Gun Based Feminine Protection and Alerting System

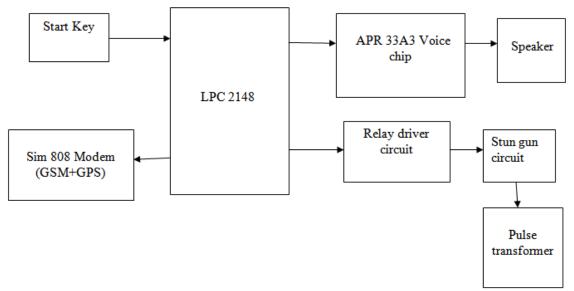## ¹M Ramya ²G S A J Manikumar

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ABSTRACT: These days the safety of an individual is at stake, it may be due to ill health or due to the increasing crimes such as the sexual assaults, molestation, abuse etc. So in order to prevent these to a certain extent, this paper proposes an automated wearable smart device to prevent the above mentioned cause, Stun-Gun also known as electroshock weapon is an incapacitating or shocking weapon which is used to protect the user from threatens like either from persons or from animals. This system designed here is aimed to deliver electric shock in the form of low voltage and low current pulses by which assails are frightened due to the adequate current pulses. The GSM and GPS are used to identify the victim's location when in need. The IP address of the LPC2148 is linked with the web server. The victim location is shared to the near by police station and to the pre registered mobile. While the speaker alerts the surroundings of the victim

I.   INTRODUCTION:

This paper is described intended to provide high level security system for women's. this device is designed which is aimed to energize self protecting system by appalling the shocking current pulses to the threatening persons. In addition the same system also raises women voice loudly in the form of seeking help from nearby persons.The paper presented here is aimed to protect the women's from illicit persons, the main device used here is known as Stun Gun or Electro-shock weapon. In general, in many countries stun guns are banned due to the severity of the current shocks, to escape from the criminals, severe shocking pulses must be generated from the stun gun by which attackers will be fainted on the spot. In few countries it is a legalized weapon and where is some countries it is banned. However, making one harmless prototype module for education purpose may be permitted and in this regard here very less current pulses are produced by the electrodes by which even a small creature may not be effected, but we can feel it by touching the electrodes. In general a stun gun is an electrical self-defense device that uses high voltage to stop an attacker. Touching a person with the prongs of the device quickly immobilizes the attacker. However, because the amperage is very low, no serious or permanent injury is inflicted. The stun gun is designed to key into the nervous system.

The control circuit is constructed with LPC2148 microcontroller chip and with the help of a push-to-on-key interfaced with it shocking weapon as well as voice chip both can be energized. These two devices remain in on for 60seconds and after that both will be switched off automatically. These devices can be energized again by activating the same key momentarily. The main objective of this paper is to develop a hardware prototype and little software to simulate the women protection system, which is quite useful for women's. LPC2148 microcontroller is used as control system.   Nowadays with the advancement of technology particularly in the field of micro-controllers, all the activities in our day-to-day living have become part of information technology and we find controllers in each and every application. Thus, the trend is directing towards micro-controller based project works. Today there is no such instrument that functions without Microcontrollers, not only instrument any electronic or electrical equipments like robots, machines, home appliances, telecommunication equipment, wireless systems, automobiles, navy equipments, air force equipments, etc. the list is endless.Therefore these controllers gained lot of popularity & are used widely for many applications.

Block diagram and its description

a) **Lpc 2148:**

 The LPC2148 microcontrollers are based on a 32/16 bit ARM7TDMI-S CPU with real-time emulation and embedded trace support, that combines the microcontroller with embedded high speed flash memory ranging from 32 kB to 512 kB. A 128-bit wide memory interface and a unique accelerator architecture enable 32-bit code execution at the maximum clock rate. For critical code size applications, the alternative 16-bit Thumb mode reduces code by more than 30 % with minimal performance penalty. Due to their tiny size and low power consumption, LPC2141/2/4/6/8 are ideal for applications where miniaturization is a key requirement, such as access control and point-of-sale. A blend of serial communications interfaces ranging from a USB 2.0 Full Speed device, multiple UARTS, SPI, SSP to I2Cs and on-chip SRAM of 8 kB up to 40 kB, make these devices very well suited for communication gateways and protocol converters, soft modems, voice recognition and low end imaging, providing both large buffer size and high processing power. Various 32-bit timers, single or dual 10-bit ADC(s), 10-bit DAC, PWM channels and 45 fast GPIO lines with up to nine edge or level sensitive externalinterrupt pins make these microcontrollers particularly suitable for industrial control and medical systems.

b) **stun gun:**

 A stun gun is a gadget used to produce a high voltage, low current signal, used mostly as a weapon to stun or send shock waves to the target with the intention to weaken or paralyze it. However proceeding to design the circuit, it should be kept in mind that in some countries, stun gun is banned. Because, this is actually a lethal weapon which can render a person mentally paralyzed. It is usually powered by a 9V battery. Here, we design a stun gun circuit using a 555 Timer to produce a current fluctuating signal and a voltage multiplier using a transformer which operates at high frequency of around 10KHz.

c) **voice record cum playback chip(APR33A)**

 The device used here belongs to aPR33A series and it is a powerful audio processor along with high performance audio analog-to-digital converters (ADCs) and digital-to-analog converters (DACs). Here apr33a3 chip is used which is having 8 audio channels, all 8 channels together can offer nearly 11 minuets duration of playback time. The aPR33A series are a fully integrated solution offering high performance and unparalleled integration with analog input, digital processing and analog output functionality. The aPR33A series incorporates all the functionality required to perform demanding audio/voice applications. High quality audio/voice systems with lower bill-of-material costs can be implemented with the aPR33A series because of its

integrated analog data converters and full suite of quality-enhancing features such as sample-rate converter. The aPR33A series E2.1 is specially designed for simple key trigger, user can record & play the message averagely for 1, 2, 4 or 8 voice message(s) by switch and be adjusted the sample rate by using different values of resistors to meet your requirement. It is suitable in simple interface or need to limit the length of single message, e.g. toys, leave messages system, answering machine etc. Meanwhile, this mode provides the power-management system. Users can let the chip enter power-down mode when unused. It can effectively reduce electric current consuming to 15uA and increase the using time in any projects powered by batteries

C) GPS Module:

The **Global Positioning System** (**GPS**) is a space-based global navigation satellite system that provides reliable location and time information in all weather and at all times and anywhere on or near the Earth when and where there is an unobstructed line of sight to four or more GPS satellites. It is maintained by the United States government and is freely accessible by anyone with a GPS receiver. In addition to GPS other systems are in use or under development. The Russian GLObal NAvigation Satellite System (GLONASS) is for use by the Russian military. There are also the planned Chinese Compass navigation system and Galileo positioning system of the European Union (EU). GPS was created and realized by the U.S. Department of Defense (DOD) and was originally run with 24 satellites. It was established in 1973 to overcome the limitations of previous navigation systems.

D) GSM Module:

Mobile communication systems of the 3rd generation, as for example **Universal Mobile Communication Systems (UMTS)** and **General Radio Packet Service/Enhanced Data Rates for GSM Evolution (GPRS/EDGE)**, are introduced soon. The coverage of these new systems will be initially regional limited to urban areas. They are completed through communication systems of the 4th generation as **Wireless Local Area Networks (WLANs)** which enable an availability of a high bit rate communication in a micro cellular environment.
To enable the vision of a mobile terminal which combines several different Radio Access Technologies (RAT), for example UMTS and WLAN, a reconfigurable and flexible hardware and software platform is necessary. In comparing the software protocol stack of different RATs to the ISO/OSI reference model, a high degree of similarity can be found.

As illustrated in Figure 1 a structural composition of the protocol software into 'permanent resident code' and 'down-loadable add-on modules' leads to a reconfigurable protocol stack. Therefore, based on the similarities of the considered RATs a generic protocol stack, i.e. the permanent resident software, is formed in step (1.). It must be as generic as possible to reduce the reconfiguration effort. In step (2.), the remaining system-specific parts are collected in a library of system specific modules. By adding standard-specific functions to the generic stack, stepwise a fully functional system-specific protocol stack is realized.
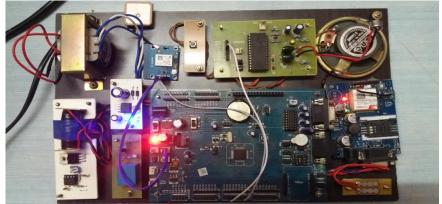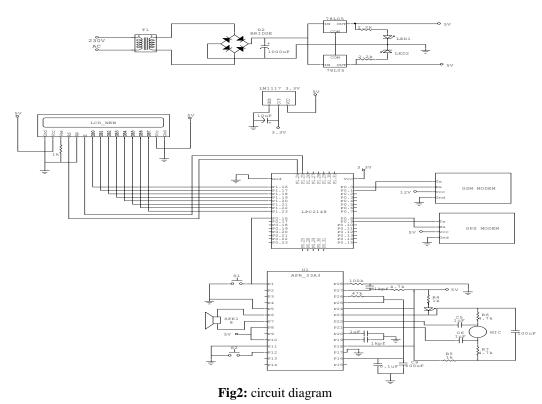
II. RESULTS

Fig1. Hardware Model

Fig2: circuit diagram

III. CONCLUSION

The problem of the women safety is increased rapidly in this environment, so I proposed as an effective Android application to prevent such type of the suspicious or natural disaster, by alerting the concern authorities using the android mobile phone which helps to stop such type of illegal activates and to trace the concern.

Scope Scope of this project is very broad in terms of other tracking system. It is online as well as offline system. This can be used insecurity world of women. It helps to efficiently increase the security and safety of women's.

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