

Intelligent Monitoring System for Security of Vehicle

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Abstract: This paper presents a voice recording (VR) system for disaster management. A voice recording IC records and playback voice of any abnormal activity of any system. This data has proven valuable for helping to determine what happened within seconds before misfortune. This system have recently being considered as one of the most active topics related to intelligent vehicles to improve vehicle safety. The main intention of the paper is to evolve a prototype vice recording for vehicle examination that can be installed inside any vehicle. This prototype can be assemble with lowest number of circuits. This can contribute to construct safer vehicles, improving the analysis for crash victims, helping insurance companies with their vehicle crash investigations, and improve road situation in order to decrease the death rate.

Keywords— *Voice recording, Embedded system, Intelligent vehicles, PIC microcontroller.*

I. INTRODUCTION

As indicated by the World Health Organization, more than a million individuals on the planet kick the bucket every year on account of transportation-related mischance. Keeping in mind the end goal to respond to this circumstance, the voice recording system[1] attracts the initial step to take care of issue. Like flight information recorders in aircraft[2], that innovation can now assume a key part in engine vehicle crash examinations. Countless in the blink of an eye on the streets contain electronic frameworks that record in the case of an accident. That is the reason it is so essential to have recorders that dispassionately track what goes ahead in vehicles some time recently, amid and after an accident. Subjective information that is taken ordinarily from casualties, observers and police reports. This framework is primarily committed to two areas. The first is the way to distinguish and gather the data from the vehicle. The second is the manner by which to current information find by simple way. To actualize the main area a few parts are utilized. While the second area was begin by utilizing the Embedded C programming. This programming helps in recording the information as well as recuperate the information from microcontroller memory to a LCD to show it.

The voice recorder is, obviously, to record what the team/driver/pilot/co-pilot say and screen all sounds that happen inside the disaster. While agents may be occupied with any witty exchange between drivers that went on just before a blast or vehicle glitch. Prepared examiners are quick to get on sounds, for example, motor commotion, slow down notices or crisis pings and pops or any unusual action. Specialists are skilled to the point that they are then ready to work out urgent vehicle data, for example, the pace of vehicle, motor rpm and can in some cases pinpoint the reason for mischance from the very sounds that vehicle is making before any occurrence happens. The Voice Recorder is likewise critical for choosing the planning of occasions as

it contains data, for example, recorded voice and other unprecedented sound.

A standard VR is fit for recording 4 channels of sound information for a time of 2 hours. The first necessity was for a VR to record for 30 minutes, however this has been observed to be lacking as a rule, huge parts of the sound information required for a progressive examination having happened over 30 minutes before the end of the recording. The soonest VRs utilized analog[4] wire recording, later supplanted by simple attractive tape. A percentage of the tape units utilized two reels, with the tape appropriately switching at every end. Different units utilized a solitary reel, with the tape joined into a steady hover, much as in a 8-track cartridge. The tape would spread and old sound data would be overwritten at regular intervals. Change of sound from attractive tape regularly demonstrates troublesome if the recorder is supplanted from water and its lodging has been broken. In this manner, the most recent outlines utilize strong state memory and use advanced recording systems, making them substantially more restricting to unsettling influence, vibration and dampness. With the lessened force prerequisites of strong state recorders, it is presently down to earth to cover a battery in the units, so recording can proceed until the vehicle stops or regardless of the fact that the vehicles electrical framework comes up short.

II. VOICE RECORDER

There are diverse sorts of voice recorders, computerized voice recorder[4]-[6]is one of the kind of voice recorder in which we can skilled to record hours of discussions. There are such a large number of advantages in utilizing a computerized voice recording which stipends security when we need to spare ourselves, it fills in as an update, and this application incorporates the procedures like recording of discussion through two strategies. Voice recording and play back circuit utilizing the rapidly accessible aPR ICs. The circuit can record and play back the voice up to 170/680 seconds. It can be utilized as a part of

flying machine's , Vehicles, lifts, programmed noting gadgets, entryway telephone and so forth. The aPR IC is given the hardware equipped for putting away and duplicating the sound. Outer microcontroller ICs are required for time controlling and setting operation of the voice recording. Just voice recording procedure depends on Single-chip[3], and acknowledge brilliant voice recording and Playback arrangement. There are some various compensation in utilizing a voice recording which comfort give us security when we wish to ensure ourselves, it acts as a brief, and this application contain the procedures like recording of discussion through various strategies through which can record hours of discussions.

This innovation is for the most part helpful in today's life, the voice recorders which gets recorded from the voice recorder IC can be effectively moved to the PC through the USB key. This permits making the sound or voicing recorded documents of interchanges, which can be duplicated and sent effortlessly. These can be embedded in further gadgets like's hard circles, CD drives, pen drive and this replicated records are effortlessly forward capable inside couple of minutes this applications are generally gainful for understudies, you can send this discussions as notes to the individuals who has not found there past classes. This gadget expends less measure of force supply.

The framework as proposed in figure 1 comprise of microcontroller, LED, voice recorded IC, Mic, Speaker, LCD[5], keypad, and so on. The voice is recorded by utilizing Mic as a part of voice recordable IC. Recorded sound listened from yield speaker. Microcontroller is use for code to set the time interims for recording by utilizing the keypad having some time terms. This framework can be intended for vehicles, classroom and also another application which will utilize voice recording and playback framework according to necessity.

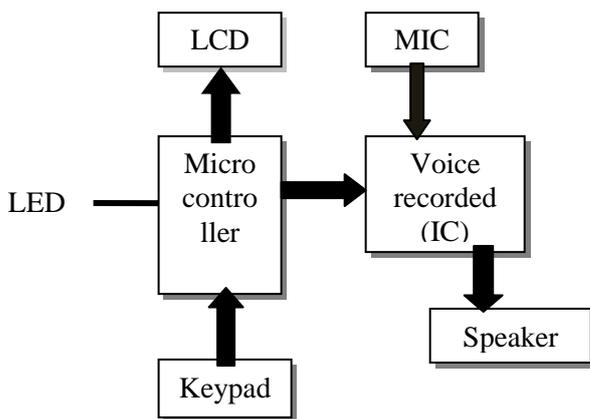


Fig.1Block Diagram of Voice recorder for vehicle.

Below writing describes section III as hard ware resources and section IV as software resources followed by the conclusion in section V and results in section VI.

III. HARDWARE RESOURCES

The hardware part consists of the some components which used in the system. This part mainly collects the

status of the recording and stores it into voice recording IC and when key pressed then it playback the recording.



Fig.2 Hardware of Voice recorder of vehicle.

To control all inputs by utilizing computerized process. As model PIC miniaturized scale controller is chosen to control the framework. This is permit the control circuit to be acknowledged by at least circuits. The gadget is better for use in numerous mechanical and business applications where low-power and low-voltage operation are vital.

The principle capacity of the microcontroller system is time controlling and setting operation of the voice recording[7]. These recordings are taken from the framework introduced in the vehicle. After the mishap every one of the information from the framework is acknowledged by the microcontroller before it goes into the rest mode. This information is accustomed to breaking down the mishap. The decision of the microcontroller's sending convention is the standard offbeat arrangement utilizing 8 information bits, no equality bit and one stop bit .Since the unpredictability is in the elucidation of the information and not in the transmission, the need was for setup that affirmation least effortlessly with most extreme dependability. What's more, a MAX232 is utilized as a middle person station, to join the microcontroller to the serial port of the PC.

IV. SOFTWARE RESOURCES

After the equipment part of the voice recording framework, it is presently time to take a gander at the product points of interest and how the client is demonstrated the information prior and then afterward the mischance. For the product execution, we send MPLAB X IDE v1.70 software[8]. The framework program written in inserted C utilizing MPLAB IDE programming will be put away in Microcontroller. MPLAB® X IDE is a product program that is utilized to cutting edge applications for Microchip microcontrollers and computerized signal controllers. This improvement device is known as Integrated Development Environment, or IDE, on the grounds that it gives a solitary coordinated "environment" to grow code for inserted microcontrollers. An improvement framework for inserted controllers is an arrangement of projects working on a PC to compose, alter, troubleshoot and program code ,the knowledge of implanted frameworks applications into a microcontroller. MPLAB X IDE is such a framework; it

contains every one of the segments expected to plan and send implanted frameworks applications.

V. CONCLUSION

This paper has given a new view for the vehicles, which is the voice recording system used for vehicles. A full and detailed description is made for every part of this system. This paper has also offered a user friendly embedded program to evaluate the data of the accident. The voice recording system built can be implemented in any vehicle. The last are always saved in the voice IC of system, at the time of accident. The data saved can be retrieved only after the accident for privacy purposes. In addition, a detailed report will be given to the user containing the recorded data in the memory.

VI. RESULTS

The system consists of an PIC Micro Controller, aPR voice recording IC , MIC,speaker,keypad,LED, Power supply and LCD.The voice IC is used to record voice at the time of the accident. The data is very useful in the post accident investigations. LCD is used to display the record mode or playback mode.

When the switch is ON it has to initialize the LCD. Then it displays the message Voice Recording For vehicle. Later it waits for pressing the first Key. This key represents the start of recording at that time LED glow for given recorded time and stop. Then press another key that playback the recorded data.

The below figures represents the outputs of the Voice Recording System.

1. Record mode:



Fig.3 Voice recorder recording mode

2.Playback mode:



Fig.4 Voice recorder Playback mode

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