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# Automatic Vehicle Speed Control with Wireless In-Vehicle Road Sign Delivery System Using ARM 7

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***Abstract*—** Nowadays people are driving very fast; accidents are occurring frequently, we lost our valuable life by making small mistake while driving (school zone, hills area, and highways). So to avoid such kind of accidents and to control their vehicle speed in such kind of places the highway department have placed the signboards. But, most vehicle drivers miss road signs more often than not. It is difficult to keep an eye out for road signs when one should be focused on driving. The main aim of our project is to control the over speed of vehicle. Here we use the RF technology for that controlling. By this project we can control the vehicle speed through the radio frequency. The transmitter will receive the signal in the predetermined area only. When transmitter receives the signal, automatically it will display as school zone and control the speed limit of vehicle. The software for the microcontroller is written using embedded C.

***Keywords*—** Automobile, RF; embedded system.

## I. INTRODUCTION

Most of the road accidents in India occur due to over speed. Recent studies show that one third of the number of fatal accidents are associated with excessive speeds in places where sharp turnings and junctions exist, as well as School zone. To avoid this government taken necessary steps such as mandatory road-signs enforce traffic laws; Cautionary road-signs are installed in sensitive areas to avoid accidents. However, most vehicle drivers miss road signs more often than not. It is difficult to keep an eye out for road signs when one should be focused on driving. To overcomes such types of situations some systems were developed such as cruise control (CC), which has the capability of maintaining a constant user preset speed and its evolution, the adaptive cruise control (ACC), which maintains pre-defined safe distance between vehicles. But practically these systems were fail on curved roads. Later on, Curve Warning systems (CWS) have been developed that uses a global positioning systems (GPS) to warn driver of approaching the curved road. But these maps need to be updated regularly and are not useful if there are unpredictable road diversions or accidents. Here we design a model where the system controls the vehicle according to the data frame that is transmitted by the RF transmitter fixed to the nearby road signs. The data frame is received by the microcontroller in automobile which controls the speed of vehicle. This is a RFID-Based Intelligent vehicle speed controller system where passive RF transceivers are arranged in the road close to the position of real traffic signals. This model can also be better utilized to improve the fuel efficiency by imposing the maximum speed limit on the automobiles at which the mileage will be more.

## II. ADVANTAGES

This project decreases the rate of accidents in the highways and Ghats areas.
Can cover maximum area in a zone.
This can be implemented with other wireless technologies for adding more stuff.
Can improve the fuel efficiency.

## III. APPLICATIONS

It can be implemented in automated systems for wireless control.
Can be used at heavy traffic areas.
Used in school zones and ghat roads.
This can be uses in driving guidance systems and automatic navigation system.

*Block Diagram*

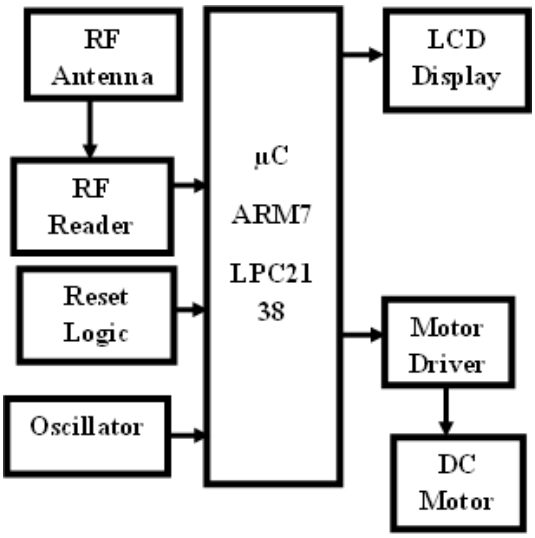


Fig. 1. Block diagram.

## IV. CONCLUSION

In this project, the design of a system that can control the speed of the vehicle has been demonstrated. Here by we conclude that this project is very easy to implement on current system, low cost and durable, ensures maximum safety, the driver gets all information about the road without distracting



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him from driving, driver gets all information even in bad weather conditions, low power consumption.

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