



# **iJRASET**

International Journal For Research in  
Applied Science and Engineering Technology



---

# **INTERNATIONAL JOURNAL FOR RESEARCH**

IN APPLIED SCIENCE & ENGINEERING TECHNOLOGY

---

**Volume: 4**

**Issue: IV**

**Month of publication: April 2016**

**DOI:**

**[www.ijraset.com](http://www.ijraset.com)**

**Call: ☎ 08813907089**

**E-mail ID: [ijraset@gmail.com](mailto:ijraset@gmail.com)**

# International Journal for Research in Applied Science & Engineering Technology (IJRASET)

## Smart Zone Smart System

Nitish A. Jadhav<sup>1</sup>, Anjali M. Lambe<sup>2</sup>, Sneha B. Bisurkar<sup>3</sup>, Ashlesha D. Nalawade<sup>4</sup>

<sup>1,2,3,4</sup> Electronics & Telecommunication Department, AITRC, VITA, Sangli, Shivaji University-Kolhapur

**Abstract**— In India there are many cars but here we have designed automatic car. In this we have implemented applications like: speed control, automatic wiper adjustment, line follow. Line follower vehicle were one of the earliest automatic guided vehicle. They are able to follow a line marked on a contrasting background, usually a black line on a white surface or a white line on a black surface. For avoiding rash driving we provide safety systems within the vehicles, especially in four wheelers. Here we are using magnetism principle using magnet and magnetic sensors.

**Keywords**—Microcontroller, relay driver circuit, Motor driver circuit, IR sensor, power supply, IC L293d, magnetic sensor, AT89s52, buzzer, motor, display unit, wiper.

### I. INTRODUCTION

India is big country in which millions of people live. Vehicle plays an important role in humans life so by using this automatic car we can reduce human efforts. By using line follower vehicle we can be able to follow a line marked on the contrasting background. Line follower vehicle works on closed loop feedback algorithm. The sensors are usually LED, LDR, LED photodiode and controller is an electronic circuit which executes the desired feedback algorithm and gear motors are used for driving the vehicles. For avoiding rash driving, we provide safety systems within the vehicles. Here we are using magnetism principle which has magnet and magnetic sensor in hospital and school areas.

### II. PROPOSED WORK

The fig1 shows block diagram of smart zone smart system. Here we have implemented one automatic vehicle and for this first IR pair used for left wheel and right wheel movement and path detection purpose. Microcontroller AT89s52 plays an important role. And two magnetic sensors are used for detection of school area or hospital area. Switch control is used for the license purpose, and display unit is used to display license information. With the help of relay driver circuit the buzzer is connected to the microcontroller and by using this here we can adjust intensity of horn. Power supply is used to operate this system. Here driver circuit of IC L293d is used, motor driver circuit has four inputs i.e. two inputs are used for the right wheel and another two for the left wheel. With the help of these motor we can move vehicle left, right, reverse, forward. And here automatic wiper adjustment takes place. This system is used for industrial purpose.

## International Journal for Research in Applied Science & Engineering Technology (IJRASET)

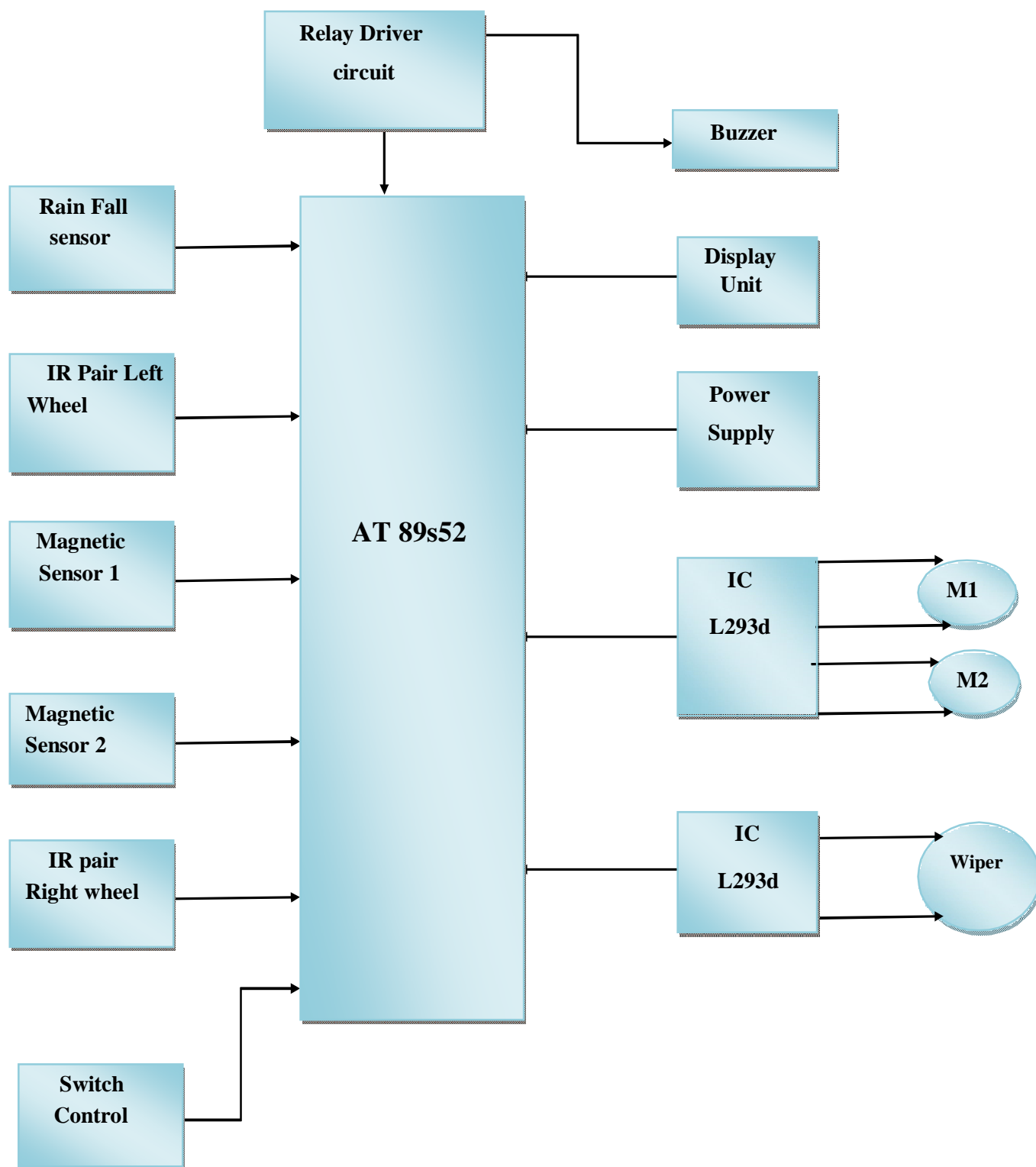


Fig.1: Block Diagram of Smart Zone Smart System

## International Journal for Research in Applied Science & Engineering Technology (IJRASET)

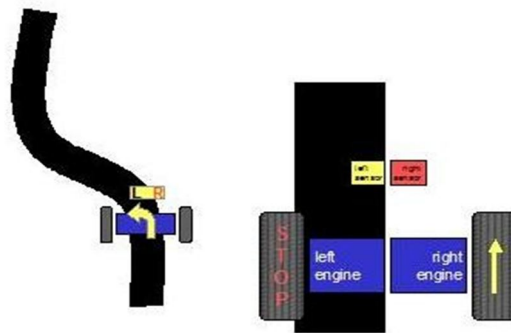


Fig.2: Path detection1

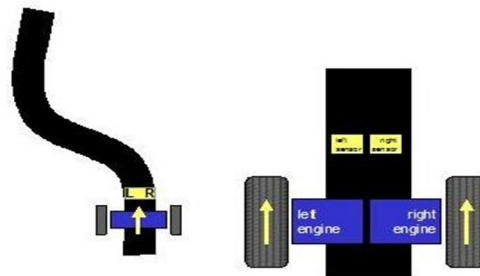


Fig.3: Path detection

Fig.1 Block Diagram of Smart Zone Smart System Fig.2 Path Detection1

Fig.3 Path Detection2

### III. OPERATION OF SYSTEM

Figure: 1 shows working of Smart Zone Smart System. The proposed work consists of different blocks:

#### A. Microcontroller

The microcontroller is the heart of project. We use the controller for the proper operation vehicle.

#### B. Motor Driver Circuit

It is used for the moving the motors of left and right wheels. This the most important part of this project.

#### C. IR sensor

IR sensor is used for the path detection purpose.

#### D. Magnetic sensor

Magnetic sensors are used for the detection of school area or hospital area.

#### E. Power supply

It is used for operating the whole system.

#### F. Display Unit

Display unit is used to display the license information.

## International Journal for Research in Applied Science & Engineering Technology (IJRASET)

### IV. CONCLUSION

This paper will be used for industrial purpose. This system is cheap & efficient as compared to other system. By using this system we can reduce human efforts. We can reduce time because this system is automatic.

### REFERENCES

- [1] Li and p. Xiong, -practical secure communication for integrating wireless sensor networks into the internet of the things, -IEEE sensors J. vol. 13 no. 10, pp.3677 – 3684, oct.2013 ||
- [2] M. Habibullah Pagarkar, kaushal Parekh, Jogen Shah, Jignasa Desai, Prathna Advani, Sidhesh Sarvankar, Nikhil Ghate, Third year information Technology Engineering V.E.S.I.T. Chembur, Mumbai 71 .
- [3] International Journal of computer Applications (0975-8887) volume 35 – No. 9, December 2011.





10.22214/IJRASET



45.98



IMPACT FACTOR:  
7.129



IMPACT FACTOR:  
7.429



# INTERNATIONAL JOURNAL FOR RESEARCH

IN APPLIED SCIENCE & ENGINEERING TECHNOLOGY

Call : 08813907089  (24\*7 Support on Whatsapp)