

# Automatic Multilevel Vehicles Parking System using RFID

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**Abstract**— Parking is a major problem in densely populated and market areas. Usually a ground or basement parking system will be provided in these areas which will be fully occupied in prime hours of the day. The major cause of this is incorrect parking of cars or vehicles by the people which will at least reduce 1-2 vehicle parking spaces for every 10-20 places. Our system facilitates parking of cars and similar vehicles in a multistoried automated system which will accommodate more cars or vehicles in less space and also provide security to the vehicle as it can only be accessed by the user and also automate the parking process so the user’s need not worry about incorrect parking and can avoid penalties. Some main features of the system are as detailed below.

**Key words:** RFID, vehicle, multilevel parking

## I. INTRODUCTION

In today’s life the use of vehicle is increases day by day and therefore the no. of vehicle is also increases .Due to increase in the no. of vehicle, problem of parking of that vehicle is arises in big malls, cities, industries, etc. The security of this vehicle is also important in parking area. For parking the vehicle in big malls, industries, it uses larger area.

## II. BASIC IMPLEMENTATION

This project is can implement in multi floored building structure. In this project basic operation and control section implement at ground floor and display is provided at the ground floor which is basically a counter that displays number of car in each floor. It informs whether the floors are fully filled with the cars or is it having place in a particular floor or not there is facility of elevator to carry the car to up and down. Movement of elevator is controlled by stepper motor. LCD display all type of message like the condition of elevator is busy or is it ready to take the car up or down. In these project three floors of building is available for car parking. Maximum storage capacity of each floor is given 3 to 10. Here in this project every floor has a 3 parking space. We added rfid in our project for the vehicle security. When the vehicle is entering in parking system the RFID detect the vehicle whether it is authorized registered or not. If it is registered with the system is allowed and process further.

## III. COMPONENT

NO	TITLE		
	Name	Body	subject
1	microcontroller	We use N79E352 microcontroller	It controls the fully system.
2	Stepper motor	We use 3 unipolar stepper motor	Stepper motor is used in our project for elevator to carry up and

3	RFID	Rfid is used for rfid tag and reader detection	down the car. Rfid is used in project for the registered car detection
4	LCD display	We use 16*4 LCD display	It is used to message display on LCD.
5	Multi floor parking structure		

Table. 1: Body and subjects of component

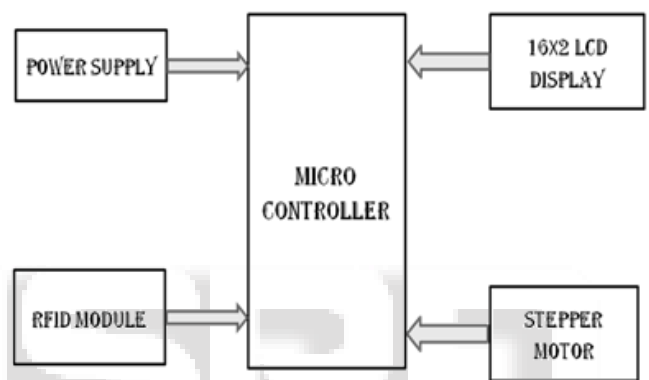


Fig. 1: Block Diagram

## IV. RFID BASE PARKING

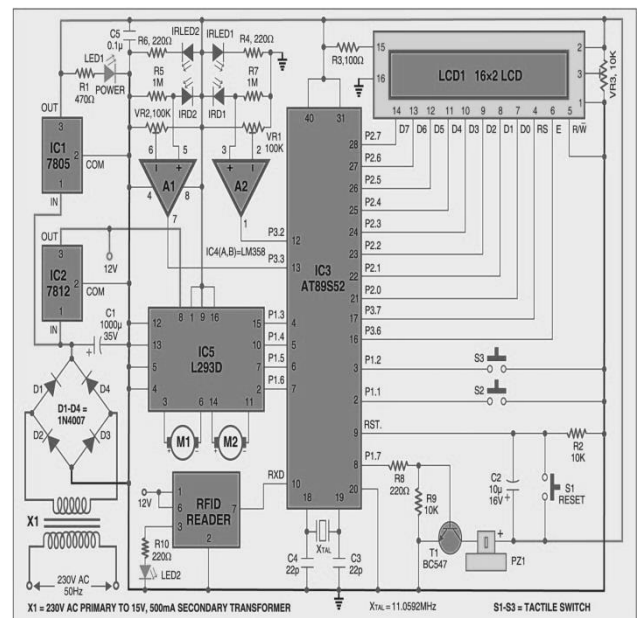


Fig. 2: Circuit Diagram

The RFID base parking system in this the all vehicles. Are parking in multilevel without the member. In all mall or traffic space solve by this system. . We are entering in new generation of parking system. So our project is focusing in

this manner & prepares a traffic system just like robot. This system, sensor scan the area of coverage (in particular rang) to detect the radio frequency & follow and decide the direction of vehicle. RFID is used to for counting manner; the whole manner is control by microcontroller.

#### A. Figure Captions

In the (fig.1) shows the basic block diagram. The fig.2 shows the fully circuit diagram

The get idea from the big traffic of parking in ruler area then solves this problem and reducing the area of parking space. There are managing the vehicles at small area

### V. CONCLUSIONS

Our project “automatic multilevel vehicles parking system using rfid” is new benchmark for use of electronic device in shopping malls & other suitable purpose to work easy.

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