

Automatic Voiture Verschelles

^[1] Dhanya G S, ^[2] Kadar Basha J, ^[3] Anjukumar S ^[4] Akshayaa D ^[5] Jeyaramanan S
^[1] Assistant Professor, ^{[2],[3],[4],[5]} UG Scholars

Department of Electronics and Communication Engineering
Sri Sairam College of Engineering, Anekal, Bengaluru-562 106

Abstract: In this project work an automatic car cover is proposed which will opens itself with the help of push button. It covers the whole car with a thin and a strong material that not only protects the car from rain, dust and mud in parked situation but, also from minor scratches. The model also consists of microcontroller and sensors for sensing the surrounding environment and based on the values, the car cover mechanism would be activated. The cover takes the shape of the car and the car is well protected..

I. INTRODUCTION

Difficult and messy task, we came up with the idea of an automated or self-dispensing car cover. The car cover would be simple, dependable, strong and affordable. Keeping this product cost effective is important because it must be able to compete in market when introduced. And, there should not be much difference between the cost of traditional covers and this one. Efforts are being made to even make it multi-purpose, since it could act as a bumper protector also, attached to the rear of the car. The basic objective behind creation of such a product is to simplify and automate the process of covering a car. This makes the process easy and much less tedious.

II. EXISTING SYSTEM



Fig 1

In existing system we cover the car manually as shown in Fig 1 for that at least minimum two people is required. This is the usual technique which is still in practice to cover the car. It is not feasible or comfortable to the customer. So, to overcome this we have proposed Automatic Voiture Verschelles concept.

problems in existing system



Fig 2



Fig 3

III. LITERATURE SURVEY

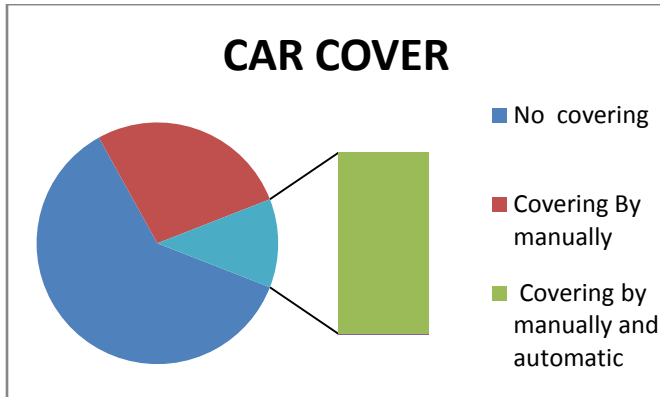


Fig 4



Fig 6

IV. PROPOSED SYSTEM



Fig 5

In this project an automatic car cover is proposed which will open itself with the help of push button as shown in Fig 6. It covers the whole car with a thin, but a strong material that not only protects the car from rain, dust and mud in parked situation but, also from minor scratches. The model also consists of microcontroller and sensors for sensing the surrounding environment and based on the values, the car cover mechanism would be activated. Here we are proposing the Automatic voiture verschelles concept . By using this concept we can cover the entire car, with the help of small push button. To do this operation we are using PIR sensor, LM35, Relay circuit.

Block diagram:

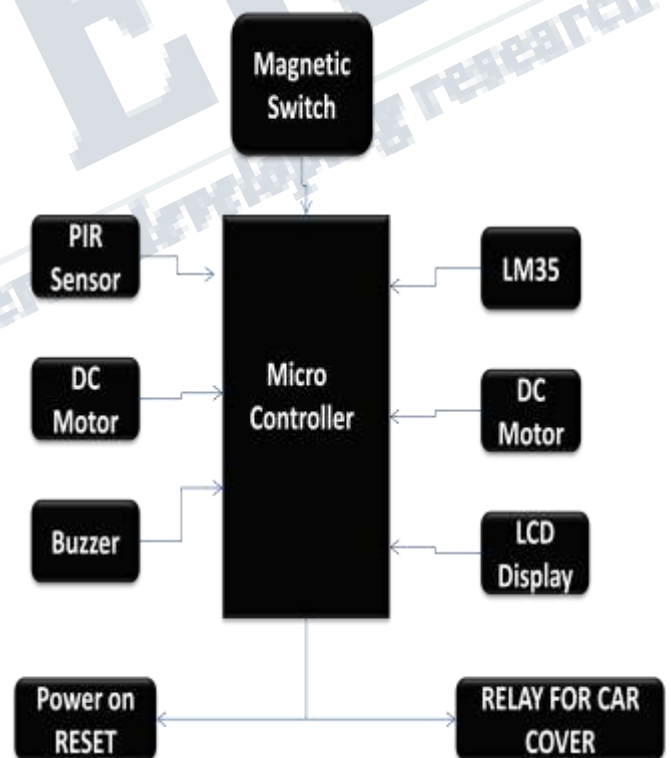


Fig 7

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Components used
Software requirements:

- Embedded C
- Keil uVision4

Hardware requirements

- Aluminium rods
- Motor
- Thin cover
- Joints
- Pins
- Bolts and nuts
- Battery
- Microcontroller
- PIR sensor
- Magnetic switch
- Temperature sensor (LM35)

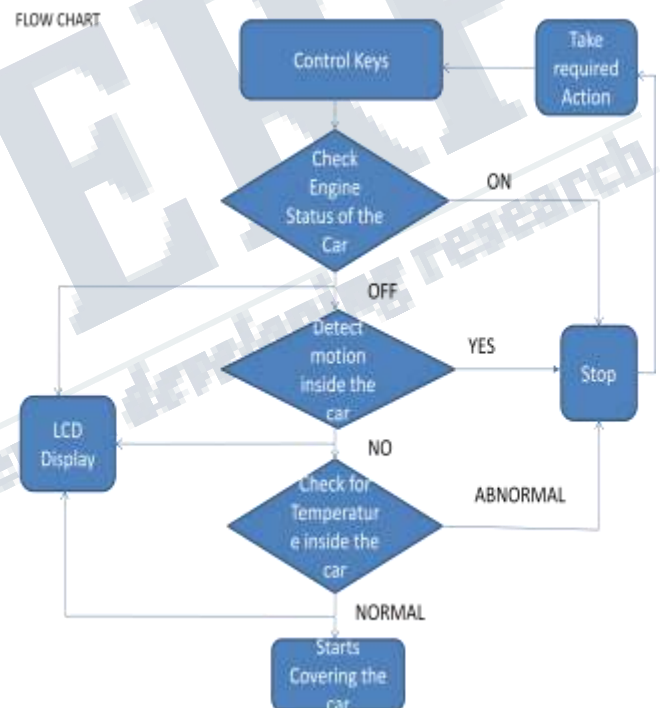
PIR Sensor

Fig 8

The modern world is filled with gadgets that get excited when they sense *human* motion. Automatic doors in elevators and shopping malls, burglar alarm at houses and shops, automatic lighting systems, electronic amenities in washrooms are just a few examples where human presence or absence puts the device into active or passive state. Smart, right? Now, what if we tell you that behind this smart response to motion is a gizmo that does not even reach the 2cm mark in size. Known as Pyroelectric or Passive Infrared Sensor (PIR, in both cases), this small electronic device is the curious case for this Insight.

LM35 Sensor Specification

The LM35 series are precision integrated-circuit LM35 temperature sensors, whose output voltage is linearly proportional to the Celsius (Centigrade) temperature. The LM35 sensor thus has an advantage over linear temperature sensors calibrated in ° Kelvin, as the user is not required to subtract a large constant voltage from its output to obtain convenient Centigrade scaling. The LM35 sensor does not require any external calibration or trimming to provide typical accuracies of $\pm 1/4^{\circ}\text{C}$ at room temperature and $\pm 3/4^{\circ}\text{C}$ over a full -55 to $+150^{\circ}\text{C}$ temperature range.

Working principle

Fig 9

The principle behind it says how to cover the entire car automatically. For that we need to consider mainly three conditions. Firstly we have to check the engine status(i.e on and Off of the car), Secondly motion detection (to identify the motion of the living things) and finally the temperature of the car in the case of long drive in the sun. If all the conditions are satisfied the process starts. This entire operation is controlled by the microcontroller.

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Advantages

- Less time for covering the car.
- Scratches can be avoided.
- Less manpower.
- User friendly.

Future scope

1. The proposed method can be implemented in IOT.

V. CONCLUSION

We developed Automatic Voiture Verschelles which covers the car automatically by sensing few parameters such as the engine status, motion and temperature by using a motion detector called PIR Sensor and a temperature sensor called LM35 before covering the car. If any discrepancy occurs it will be displayed in the LCD.

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