

# Survey Paper on Bank Loan Watcher System

Vaishnavi Jadhav<sup>1</sup> Pratiksha Kanse<sup>2</sup> Rutika Bhandare<sup>3</sup> Mr. Rajesh Dodake<sup>4</sup>

<sup>1,2,3,4</sup>Department of Electronics And Telecommunication Engineering  
<sup>1,2,3,4</sup>DACOE, India

**Abstract**— Our project deals with the design and implementation of Bank loan surveillance system and theft control system for an automobile loan provider. Everyone needs a vehicle in the current world, whether it be a two - or four- wheelers. As of now most of them are hiring the vehicles through banks by getting loans. After a few months, the bank’s customers stop paying their debts properly, which irritates the bankers. It also creates displeasure for the bankers. In our project we have used Arduino GSM MODEM System.

**Keywords:** Arduino, GSM Interface, Relay Driver Circuit with Relay, Alarm Driver Circuit with Alarm, LCD Display

## I. INTRODUCTION

The goal of this project is to create a GSM- based loan watchdog system that will avoid the banker’s irritation. Everyone needs a vehicle in the current world, whether it may be a two- or four-wheeler four. The majority of them are currently employing.

The vehicles through banks by getting loans. After a few months, the bank’s customers stop paying their debts properly, which irritates the bankers. A popular technology that combines application with an Arduino was effectively used in the suggested system. ARDUINO, GSM MODEM in our project.

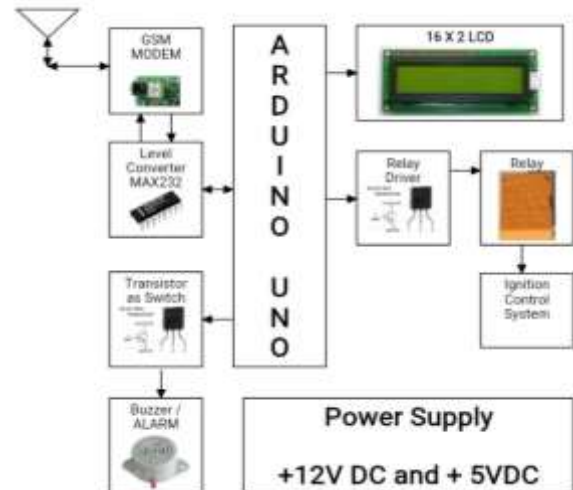
## II. EXISTING SYSTEM

In the current world, everybody is in need of vehicle whether it may be two or four wheelers. As of now any people of are hiring the vehicles through banks by getting loans. The customers of the bank are not paying the debts properly after few months, so it creates displeasure for the bankers. We found out a solution for the bankers for their safer side. In our project we have the microcontroller and GSM Modem System.

## III. PROPOSED SYSTEM

The initiative that will help loan providers for 2-4 wheelers is called “The Bank Loan Watcher System”. In this project “GSM Modem” is used to send messages instructing customers to make EMI payments on a specific date. If he does not pay EMI on time then ignition of system is locked by sending message.

## IV. SYSTEM BLOCK DIAGRAM



## V. WORKING

In this Project When you buy the vehicle through loan they will provide A UNIQUE NUMBER via GSM System which operates particular date only. In order to activate the bank will send a SMS to the vehicle where GSM Modem is being attached. This PIN number is sent to microcontroller. Here the microcontroller is the flash type re-programmable microcontroller in which we have already programmed with PIN number. So the type PIN number is compared with stored number if the PIN number is valid the microcontroller activates the relay driver circuit. Relay output is directly given to engine ignition system. Now we can start the vehicle. This number works for particular month only. After the particular month the microcontroller activates the alarm driver circuit. The alarm makes the sound to indicate that number valid date is completed. Now we cannot start the vehicle. The customer has to pay the loan amount to bank. So the bank provides another PIN number via SMS.

## VI. MODULES

- Arduino
- GSM Modem
- LCD Display
- Relay Driver
- Level Converter
- Buzzer
- Power supply
- Output devices

### A. Module Description

#### 1) Arduino

Arduino is an open-source platform used for building electronics projects. Arduino consists of both a physical programmable circuit board and a piece of software, or IDE

(Integrated Development Environment) that runs on your computer, used to write and upload computer code to the physical board.

[4] [www.sunrom.com](http://www.sunrom.com)

[5] [www.8052.com](http://www.8052.com)

### 2) *GSM Modem*

With the quick development of wireless data services, a growing number of applications have emerged including wireless POS, remote monitoring, auto navigation, and remote monitoring. As a result, wireless communication must be supported by an increasing number of devices. In this system, GSM is used to send messages.

### 3) *LCD Display*

To represent the project status in this project, we are employing 16 x 2 intelligent "LCD" display. This display has a typical HD44780 chipset and has 16 characters on 2 lines. It interfaces fairly easily and works well with any microcontroller. It features an 8-bit parallel interface on the LCD. Either all 8 bits plus the three control signals, or just 4 bits plus the control signals.

### 4) *Relay Driver*

The microcontroller's output is insufficient to directly drives the relay. As a result, we use a relay driver block with a transistor acting as a switch to drive the relay. We utilized 4 relays since we are controlling 4 devices.

### 5) *Level Controller*

A standard for serial binary data signals communicating between a DTE (Data terminal equipment) and a DCE is called RS-232 (Recommended Standard 232). (Data Circuit-terminating Equipment). It is frequently utilized in serial ports in computers. Many microcontroller boards have long used MAX232 chips. It provides 2-channel RS232C port and requires external 10uF capacitors. In this I. C. contains two transmitters and two receivers in one bundle. When you simply wish to use the Transmit and Receive data Lines, this is helpful in many situations.

### 6) *Buzzer*

Buzzer as output device in this system. When SMS is received and PIN is incorrect then Buzzer turns ON for some time.

### 7) *Power Supply*

For our project we require + 5 Volt and +12 Volts supply. +5 Volts is given to Micro-controller board, and LCD display. +12 Volts are used for GSM MODEM.

### 8) *Output Devices*

We are using ignition control system as output. This ON-OFF ignition is done by using relay as switch. The NC terminal is connected in series with ignition control. So when relay is OFF due to NC connection ignition is ON. But when relay is ON then NC will become NO and ignition will turn OFF.

## VII. CONCLUSION

In this research, we suggest a "Bank loan watcher system" that reduces bank procedures and is time efficient. We discovered a remedy for the bankers' safety. This method is beneficial to the government, commercial banks, and financial companies.

## REFERENCE

- [1] Intelligent anti-theft and tracking system for automobiles
- [2] GSM Modem-Real time tracking management system
- [3] Bank Loan Watcher System