**VEHICLE ANTI-THEFT DEVICE WITH THREE LEVELS OF SAFETY**



**DEPARTMENT OF ELECTRONICS AND**

**COMMUNICATION ENGINEERING**

**NATIONAL INSTITUTE OF TECHNOLOGY MANIPUR**

**MAY,2024**

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**VEHICLE ANTI-THEFT DEVICE WITH THREE LEVELS OF SAFETY**

*Report Submitted to*

*National Institute of Technology Manipur*

*for the award of the degree*

*of*

**BACHELOR OF TECHNOLOGY**

**in Electronics and Communication Engineering**

*by*

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**NATIONAL INSTITUTE OF TECHNOLOGY MANIPUR**

**MAY,2024**

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**DECLARATION**

I the undersigned, certify that

**a.** The work contained in this report is original and has been done by me under the guidance of ***Dr. Loitongbam Surajkumar Singh,*** *Assistant Professor, Department of Electronics and Communication Engineering*.

**b.** The work has not been submitted to any other Institute for any degree or diploma.

**c.** I have followed the guidelines provided by the Institute in preparing the report.

**d.** I have conformed to the norms and guidelines given in the Ethical Code of Conduct of the Institute.

**e.** Whenever I have used materials (data, theoretical analysis, figures, and text) from other sources, I have given due credit to them by citing them in the text of the report and giving their details in the references. Further, I have taken permission from the copyright owners of the sources, whenever necessary.

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Department of Electronics and Communication Engineering

राष्ट्रीय प्रोद्योगिकी संस्थान मणिपुर

National Institute of Technology Manipur

(An autonomous Institute under Ministry of Education, Govt. of India)



**CERTIFICATE**

This is to certify that the dissertation report entitled, **“Vehicle anti-theft device with three levels of safety”** submitted by ***Kambam Taibangnganba (20105006)*** submitted to National Institute of Technology Manipur, India is a record of Bonafide Project Work carried out by him under my supervision and is worthy of consideration for award of the degree of ***Bachelor of Technology in Electronics and Communication Engineering*** of the Institute.

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Kambam Taibangnganba

**ABSTRACT**

The proposed anti-theft device for vehicles presents a comprehensive solution aimed at enhancing security, reliability, and cost-effectiveness. Leveraging a combination of advanced technologies including RFID, accelerometer, GPS, and GSM modules, the device offers three levels of safety to safeguard against vehicle theft.

At the first level of security, RFID technology is employed for authentication purposes. By checking for the presence of a specific code from an authorized tag, the device selectively grants ignition permission. Any absence of the desired code maintains the ignition line in an off state, effectively preventing unauthorized access.

Moving to the second level of security, an accelerometer is utilized to detect any movement of the vehicle. This feature acts as a secondary line of defence giving additional security measures upon detecting suspicious activity, thereby thwarting potential theft attempts.

The third and final level of security integrates GPS and GSM modules into the device. This combination enables real-time tracking of the vehicle's location and facilitates communication with the owner in the event of any security breach. By notifying the owner of the vehicle's whereabouts via a phone call and providing the current location, this feature not only enhances security but also offers peace of mind to the owner.

We Tested on a two-wheeler scooter (Activa) over several weeks with positive results, the proposed device demonstrates its practicality and efficiency in real-world scenarios. Its successful implementation underscores its potential utility for a wide range of vehicles, making it a valuable asset in reducing the risk of theft and loss.

Moreover, beyond its immediate benefits, the project serves as an inspiration for future developers to engage in similar endeavour. By sharing insights and experiences gained from the development and deployment of the anti-theft device, the project encourages further innovation in vehicle security, ultimately contributing to the ongoing efforts to mitigate the risk of vehicle theft and enhance overall safety.

**List of figures**

**Figure no. Name of figure Page no.**

Fig 1 Functional block diagram of the device. 9

Fig 2 Arduino UNO board. 12

Fig 3 Arduino IDE. 13

Fig 4 Arduino UNO board showing various pins. 14

Fig 5 Arduino IDE download. 15

Fig 6 Type A to Type B connecting cable. 16

Fig 7 Launching Arduino. 16

Fig 8 Choosing board and port name. 17

Fig 9 Basic blink code to check Arduino is Working 18

Fig 10 MFRC522 with RFID tag. 19

Fig 11 Simplified block diagram of MFRC522. 21

Fig 12 MFRC522 showing pin configuration. 22

Fig 13 Simplified block diagram of ADXL345. 23

Fig 14 ADXL345 showing various pins. 24

Fig 15 Functional block diagram of Sim808 . 26

Fig 16 Pin diagram of Sim808. 27

Fig 17 5V Relay module. 31

Fig 18 Jumper wires. 32

Fig 19 Operational flowchart of our Proposed device 34

Fig 20 Implementation of our device on a vehicle. 35

Fig 21 Sample picture of device sending location. 35

Fig 22 Sample picture of device calling 36

**List of Tables**

**Table no. Name of figure Page no.**

Table 1 Relay pin configuration. 29

**CONTENTS**

**Page Number**

i

ii

iii

iv

v

vi

vii

viii

ix

x

**Title**

Title page

Cover page

Declaration

Certificate by Supervisor

Certificate by HOD

Acknowledgement

Abstract

List of figures

List of tables

Contents

1

9

11

11

19

22

25

28

31

34

37

39

40

**Chapter**

1. Introduction
2. Methodology
3. Hardware Description
   1. Arduino UNO

3.2 RFID MFRC522

3.3 Accelerometer ADXL345

3.4 Sim808 (GPS&GSM module)

3.5 5V Relay

3.6 Jumper Wires

1. Hardware and Software Integration
2. Conclusion

References

Appendix