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Unmanned Multiple Railway Platform Controlling and Bi-Directional Train Tracking With Alariming System

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ABSTRACT: At present Indian Railway is that the biggest railway network among the south Asia. A definitive Purpose of our project example is to boost the Indian railway platforms to assist the physically challenged, aged persons and folks to cross the intersection platforms. Moving a physically challenged individuals beginning with one platform then onto serial platform is hard by utilizing means and escalators Movable plate's sq. measures connects every the platforms of constant Height. The foremost aim of our project is to construct a movable artificial railway platform on high of the tracks with same platform height .it will facilitate the passengers to easily move from one platform to a unique to realize destination. Planned system is to boot capable of recognizing train arrival and departure and there by intelligent dominant the movable platform. the foremost a region of the system could also be a microcontroller, IR sensors, DC motors, driver board and buzzer are interfaced to the microcontroller. Once there isn't any train on the tracks, the microcontroller will move the dc motors thereto movable platform setup is connected.

I. INTRODUCTION

Railroad line could be a course of action of 2 parallel lines of long bits of steel. Rail transport could be a strategy for mercantilism of voyagers and things on wheeled vehicles running on rails that is that the most commonly used transportation vehicle. The bulk of the final population picks this transportation primarily for marginal effort and it offers comfort capability and it's the foremost advantageous methodology of individual transport each for long separation and rural activity. However sadly, still accidents square measure still a significant concern not solely in native however additionally within the international, for delivery concerning loss of valuable life and loss of economy. Presently, varied railroad mishaps square measure occurring due to the heedlessness in manual tasks or absence of laborers.

I.I. OBJECTIVE

- The aim and objective of the projected project is to boost the protection of the railroad line and to save lots of human life.
- The key objective of this application is public safety.
- The main objective is: A definitive Purpose of our project epitome is to spice up the Indian railway platforms to help the physically challenged, aged persons and people to cross the intersection platforms.

II. LITERATURE SURVEY

1.Velayutham, R., T. Sangeethavani, and K. Sundaralakshmi. "Controlling railway gates using smart phones by tracking trains with GPS."

Velayutham et al developed a system that tracks and detects the arrival of the train by exploitation GPS. The GPS is employed for trailing the train and Google Map shows the train tracks. thus, of prepare following utilizing GPS is established with the versatile application. Utilizing this application, the motor driver controls the railroad door. within the system, locomotive engineer controls the rail gate and also the automatic dominant of railway gates is absent. However, our projected system is completely machine-controlled



2.Chandrappa, S., Dharmanna Lamani, Shubhada Vital Poojary, and N. U. Meghana. "Automatic Control of Railway Gates and Destination Notification System using Internet of Things (IoT)." (2017)

Chandrappa developed a system of Automatic Railway Gate Controller that operates the railway gates while not a gatekeeper. 2 Infrared obstacle detection sensors want to establish the arrival and departure of trains [11] and a stepper motor went to management the gate. Here, by exploitation solely IR detector it's troublesome to induce actual location of train, and additionally IR sensors can't work well at dark. however, we have a tendency to use inaudible detector that works each in light-dark and additionally use GPS module for trailing location and menstruation distance

3.Dhande, B. S., and U. S. Pacharaney. "Railway Management Systemusing IR sensors and Internet of Things Technology."

To find space of the faulty track, compressed IOT web site utilizing Xampp server.GSM module.

III. EXISTING SYSTEM AND ITS DISADVANTAGES

- The railway transportation is that the least expensive mode once compares to different mode of transportation in Asian country.
- This railway transportation facing several issues. To cross the railway track it'll causes immeasurable accidents because of quality.
- In this case individuals cross the platform by exploitation way, it's needed additional temporal arrangement and too troublesome to physically challenged, aged persons.

IV. PROPOSED METHOD AND ITS ADVANTAGES

In this project we've got used these systems for automatic gap and shutting of Movable plates upon detective work arrival or departure of the train. The IR sensors square measure placed at every finish of the plates that detects the train and controls the operation of plates. The advantages are

- The system uses 2 IR sensors that help to sight the train by gap and shutting the movable plates.
- Low power consumption, High performance and fast reaction time.

V. BLOCK DIAGRAM

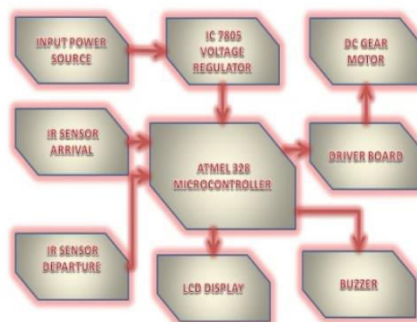


Figure no: 1 Block Diagram for proposed system

VI. CIRCUIT DIAGRAM

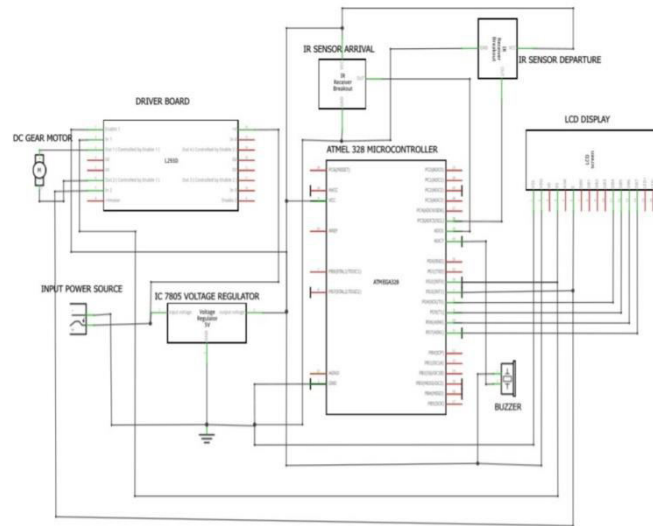
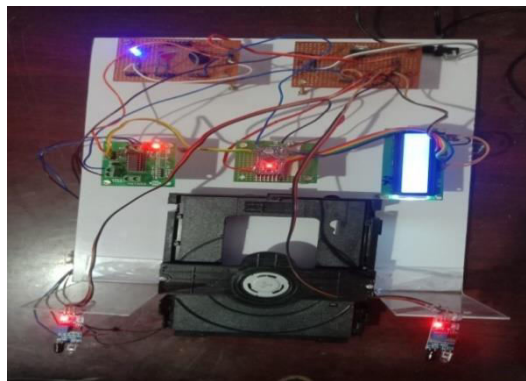


Figure no: 2 circuit diagrams for proposed system

- The circuit diagram consists the elements of core elements of ATMEGA328P Microcontroller, IR sensor, driver board, DC gear motor, buzzer, 5v regulator, power supply, liquid crystal {display|LCD|digital display|alphanumeric display} display.
- 12v Power offer is given to regulator for voltage regulation 12v to 5v then 5v offer is given to controller. VCC and GND pins square measure connected to regulator.
- IR detector connected to arrival and departure aspect and controlled by ATMEGA 328P microcontroller. VCC connected to positive, GND connected to negative and output pins square measure connected to controller analog pins.
- Driver board connected to controller and activated DC gear motor. VCC connected to positive, GND connected to negative and output pins square measure connected to controller digital pins.
- LCD displayed the values. VCC connected to positive, GND connected to negative and D4, D5, D6, D7 and Rs, E square measure connected to controller.

VII. RESULTS





VIII. CONCLUSION

The main aim of the system is to automatic gap and shutting of the movable platform that helps the line. It avoids railway accidents by automatic gap and shutting of the platform. Cut back the death loss occurring because of track crossing in train is bestowed. Whereas the Buzzer is going to be accustomed alert the traveler and insane pilot. The system achieves an honest live of security with the aids of microcontrollers, dc gear motors that function sensors.

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