

Automatic Railway Crossing Gate Control System

About This Project:

This Project aims to provide an automatic railway gate control at the level crossing replacing the manual gate control. From this project we'll know how to implement the automation in railway gate control using Arduino. Application of this project is the direct implementation in real world. Some components will be required more but the main working principle will be same. Now, other alerting systems can also be developed by using Arduino. The main aim of this project is to reduce train accidents at railway level crossings to the minimum. The Automatic Railway Gate Control System Project makes use of an Arduino Nano to control the whole circuit. Servo motors are used to open and close the railway gates. Ultrasonic sensors are used for sensing the arrival or departure of train. The main objective is to close the railway gates when the train approaches it, so as to block vehicles from going across the track. As soon as the train moves further away from the railway crossing, the gates must automatically open to allow vehicles to cross by.

Block Diagram:

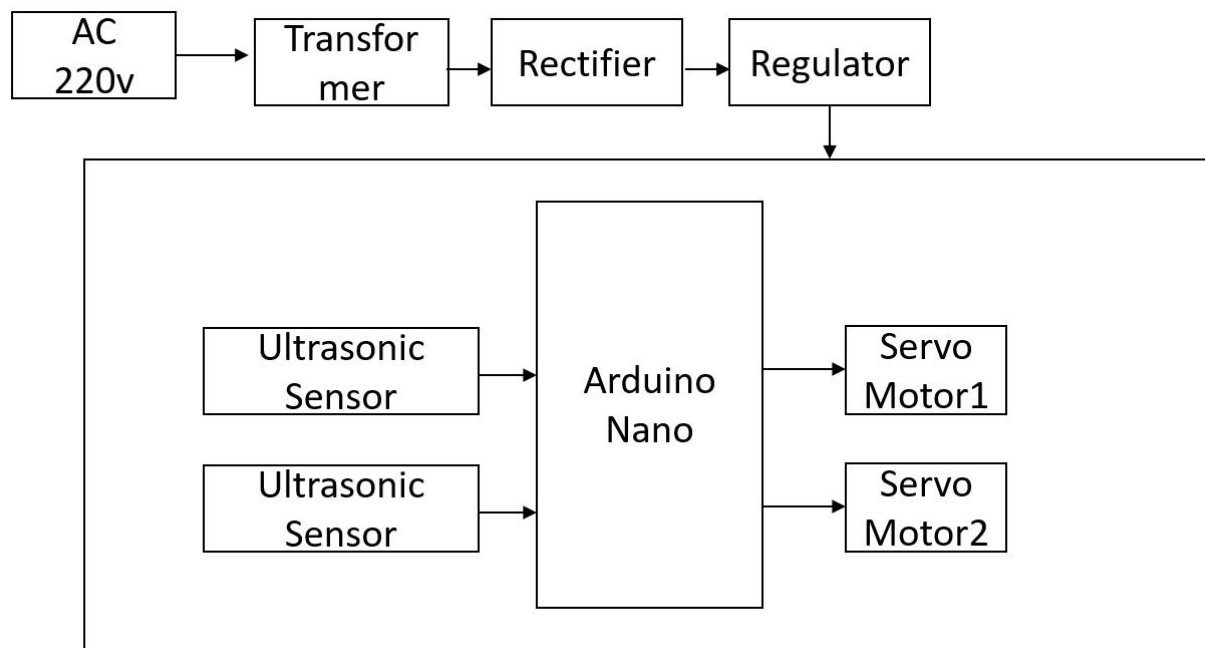


Fig: Automatic Railway Crossing Gate Control System

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Required Instruments:

- Microcontroller/Arduino.
- Servo Motor.
- Ultrasonic Sensor.
- Transformer.
- Rectifier.
- Capacitor.
- Resistor.
- Voltage Regulator.

Advantages:

- Reduce Accident.
- Very Cost Effective.
- Very fast sensing can be done.
- Physical power is not wasted.
- More accuracy.

Applications:

- It can be widely used in Rail-way crossing.



N.B: Any modification of this project can be done as per your requirement. We will make the project according to your needs. Contact us with your any innovative engineering projects idea. We will help you to implement your project.

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