AUTOMATIC GATE USING ARDUINO

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ABSTRACT

Automatic gate is one of the most preferable domestic intended to provide easy access to gated home. There are three types of automatic gate mechanism, such as sliding, screw drive piston and swing cubic underground. Designs available today are limited only to the three types mentioned. Products available in the market are quite expensive. Most of the products available in our country are imported from foreign country. The objectives of this project is to study, analyze, and develop a circuit that concern with the cost reduction and the mechanism produce should be safe and reliable as well by using a microcontroller. For this project, Arduino microcontroller was used to develop a proper automatic gate mechanism. Analysis by a simulation are also helps in order to select proper electronic component specification or sizes for the product development. Therefore, the durability assessment results are significant to reduced the cost and improve the product reliability so as to gain customer confidence. In order to improve the designed circuit, the output simulation must be obtain to make the gate mechanism function properly.

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CHAPTER 1

INTRODUCTION

1.1 Background Study

Automatic gates are used to control access into a secured area. Most commonly, automatic gates are used at the entrance to the facility, and are used to control vehicular access on and off of the site. For example, a manufacturing plant may use an automatic gate at its main entrance. All vehicles entering and exiting the plant must do so through the automatic gate. Automatic gates are also used at interior areas within a facility. For example, automatic gates are commonly used within the inside of a parking garage to separate employee parking areas from public areas of the garage.

In this project we decided to make an automatic gate at home. This is because our purpose are to make our home more safety and make user life more easier with this machine helps. This gate have a sensor so,the user no need to get out from their vehicle because the gate will open and close automatically.

To make this gate more secure,we decided to add a remote control that have an ON and OFF button. If others person try to get in into that house,they cannot get in easily because when the users Off the gate, the gate will not functioning. So,the user only can access the system. This show that the automatic gate are secure and can be trust by users.