



LED & LDR

Handmade

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Highlights

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Documentation

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Categories: [Engineering project](#), [IC & Transistor](#), [Mini Project](#), [Projects](#)

Product Description

INTRODUCTION:

An LED (Light Emitting Diode) and LDR (Light Dependent Resistor) based laser security system is a simple yet effective way to detect intrusion or unauthorized access to a specific area. While it's not an actual laser system, it can mimic the functionality by using an LED as a light source and an LDR to detect changes in the light intensity. To create an LED and LDR based laser security system using an IC555 timer, we can design a circuit that utilizes the timer's functionalities to generate a modulated light signal and detect any interruption using the LDR

AIM:

The aim of this project is to design and implement a laser security system using readily available components such as LEDs, LDRs, and an IC555 timer. The system should be capable of detecting and alerting against intrusions or unauthorized access to a specific area. The LED and LDR based laser security system using an IC555 timer is a project aimed at creating a cost-effective and easily implementable security system. This system detects intrusions or unauthorized access to a specific area by using an LED as a light source, an LDR to detect changes in light intensity, and an IC555 timer to generate a modulated light signal.

PRINCIPLE:

The principle behind this project lies in the interruption of a modulated light signal and the detection of changes in light intensity by the LDR. The IC555 timer is configured as an astable multivibrator, generating a continuous square wave signal that modulates the LED's light intensity. The LDR, placed in the path of the modulated light, detects changes in light intensity caused by an intrusion. These changes in intensity are then processed to trigger an alarm or alert.

[**Download Free Project Synopsis**](#)

Working Video

Disclaimer:

This is a handmade complete working Models, Projects & Activity kits supported by rough study material to make a suitable projects report by the student. It is using Cardboard/Wooden base, Paper, Foam based board, stationary items, Electronic-Electrical Components, Mechanical & Scientific goods as per the requirement of a particular model. Colour of product and decoration item may be varying according to availability of material but we make ensure that we will deliver the product with same working, structure and dimensions as describe in product description section.
