

**EXCLUSIVE LETTER BOX**

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## **ABSTRACT**

A letter box or known as mailbox is a mechanism for receiving incoming mail at houses. This letter box become important part of the house. Most people are not aware about the presence of letter in the mailbox. Therefore, electronic letter box designed to improve the system of older letter box to be more effective. This project designed to modify the existing letter box to ensure that the letter in good condition. In addition, the purpose of this project is to notify the user about the presence of letter in the mailbox. The system of this mailbox have been controlled with microcontroller which Arduino and also using Light Dependent Resistor(LDR) or light sensor to detect the letter when the letter is put in the mailbox. We also used LED and buzzer to acts as alarm when there are letter in the mailbox. At the same time, Liquid Crystal Display(LCD) will display "You Got A Letter". Hence, users will aware about the letter in the mailbox. In this project, Proteus 7 is the one of the circuit simulation used in this project to designed a new circuit for our project. Other than that, software Arduino 1.0.5 is the software used to program the coding to upload to the arduino microcontroller therefore the circuit will be control based on the coding that have been upload to the arduino. For this project, the circuit simulation smoothly operate as expected using the Proteus 7. The simulation shows speaker, LED, LCD,LDR and buzzer function well to develop the project. In conclusion, electronic letter box have been proved by adding a solar plate that acts as supply to replace the battery and encourages user to save the electricity. This mailbox will be very useful device and being such a important device for homes.

## TABLE OF CONTENTS

CHAPTER	TITLE	PAGE
	EXCLUSIVE LETTER BOX	ii
	APPROVAL SHEET	iii
	CANDIDATE DECLARATION & SUPERVISOR'S APPROVAL	iv
	ACKNOWLEDGEMENT	v
	ABSTRACT	vi
	TABLE OF CONTENTS	vii
	LIST OF FIGURE	ix
	LIST OF TABLES	xi
1	INTRODUCTION	
	1.1 Background Project	1
	1.2 Problem statement	3
	1.3 Objectives	3
	1.4 Scope of study	3
	1.5 Project Contribution	4
2	LITERATURE REVIEW	
	2.1 Introduction	5

## CHAPTER 1

### INTRODUCTION

#### 1.1 BACKGROUND PROJECT

A letter box or mailbox is a mechanism for receiving incoming mail at houses, office and others. This letter box becomes an important thing or important part for the house. For the opposite purpose of collating outgoing mail, a post box is generally used instead. Letterboxes or mailboxes consist of four primary designs, a slot in a wall or door through which mail is delivered (through-door delivery), a box attached directly to the house (door-to-door delivery), a box mounted at or near the street (curbside delivery), a centralized mail delivery station consisting of individual mailboxes for an entire building, and a centralized mail delivery station consisting of individual mailboxes for multiple recipients at multiple addresses in a particular neighborhood or community.



Figure 1.1.1 : Letter box