

AUTOMATIC CHICKEN FEEDER SYSTEM
USING MICROCONTROLLER

This project is presented as fulfillment of the award of the Bachelor in Electrical Engineering (Honours) of UNIVERSITI TEKNOLOGI MARA

AHMAD AZKA BIN HJ MOHD ZAIN

Faculty of Electrical Engineering

UNIVERSITI TEKNOLOGI MARA

40450 SHAH ALAM

SELANGOR DARUL EHSAN

Email: azkamohdzain@gmail.com

ACKNOWLEDGEMENT

In the name of ALLAH S.W.T, the Beneficent, the Merciful. Thanks to Allah who has given me the strength and ability to complete this final project and thesis successfully. Peace be upon our Prophet Muhammad S.A.W, who has given light to mankind.

With this opportunity I would like to express a special gratitude to my supervisor Prof. Madya Datin Dr. Wahidah Mansor who deserves most credit for her patience, inspiration and advice in guiding me towards the completion of the project and report.

My sincere appreciation to my friend Mohd Zharif Othman, that willingly involved and helped me in finishing up the casing design of this project.

Last but not least, a special dedication to my family for their caring, support and advice that makes this work possible. Not forget to all my friend who had given me support and contribution to finish this project. May Allah bless and reward them for their generosity.

ABSTRACT

The previous chicken feeder system operates manually to feed the chicken. This system has error in amount of grain to feed, wasted grain and consume man power to operate it. After a few years, people move toward design the automatic system that need more energy, money and time to operate it which is need to be improved to satisfy the user requirements. A solution to these problems is to design an embedded system that provides a portable chicken feeder system that running by low power and low cost [1, 2]. This paper describe an automatic chicken feeder system that provide the user to select the desired amount of feed measurement, to select number of day to feed and the system will automatically feed the chicken. The system uses a microcontroller to read user selection, set the amount of grain and feed the chicken according to what the user select. A plate is used to control the grain from the storage and attached to a motor. The amount of grain to feed the chicken was performed by the software to control the microcontroller and interfacing circuits.

TABLE OF CONTENTS

	Page
DECLARATION	i
ACKNOWLEDGEMENT	ii
ABSTRACT	iii
TABLE OF CONTENTS	iv
LIST OF FIGURES	vi
LIST OF TABLE	vii
LIST OF ABBREVIATION	viii
CHAPTER	
1	
INTRODUCTION	
1.1 Introduction	1
1.2 Objective of the project	2
1.3 Scopes of work	2
1.4 Organization of the thesis	3
2	
LITERATURE REVIEW	
2.1 Introduction	4
2.2 Chicken feeding	4
2.3 Chicken feeder system	4
2.3.1 Manual chicken feeder system	6
2.3.1.1 Advantages and disadvantages	7
2.3.2 Automatic chicken feeder system	8
2.3.2.1 Advantages and disadvantages	9
2.4 Microcontroller for automatic system	10
2.4.1 The use of microcontroller to develop automatic and portable system	10
2.4.2 Advantages of using microcontroller	11
2.4.3 Application of microcontroller	11
2.4.4 Other people work on microcontroller system	12
2.5 Conclusion	12

CHAPTER 1

1.1 INTRODUCTION

Although we are moving towards develop nation status by 2020, agriculture is still relevant. Nowadays, farming and breeding are as important as the other crucial sectors. Year by year the numbers of entrepreneurs that get involve in commercializing chicken breeding increases. Nowadays, government also encourages people to make small business as an alternative to increase their income and at the same time improving our economy status. When people do this as a commercial purpose, they need to determine the suitable size of the chicken cage. The specific size of the chicken cage is needed in order to cater to the total number of the chickens. For commercial purposes, usually people allocate more than 5000 chickens in some big cages. Most people usually have less than 2000 chicken one cage. That would be considers as a small business. Another aspect also needs to be considered is the method of feeding the chicken. The method can be done in two ways either manually or automatically.

As we know before the development of technology and ICT people used the conventional method of feeding the chickens which is by filling containers with grains and foods manually. The main problem with this method is that we need to continuously provide the food, be alert and conscious on the food remaining in cages all by ourselves. The exact amount of the food to be provided also cannot be determined clearly. It is such a waste of time, energy and non-economical. Breeders also find that it is difficult to manage their business effectively because they need to be around the cages every now and then to monitor the poultry.