SMART HOME REMOTE

MUHAMMAD HASIF BIN ABDUL WAHID
MOHAMMAD KAMIL BIN ROSTAM EFFENDI

A project report submitted to the Faculty of Electrical Engineering,
Universiti Teknologi MARA in partial fulfillment of the requirements for the award
of Diploma of Electrical Engineering.

FACULTY OF ELECTRICAL ENGINEERING
UNIVERSITI TEKNOLOGI MARA
MALAYSIA

OCTOBER 2015

ACKNOWLEDGEMENTS

In the Name of ALLAH, the Most Gracious and the Most Merciful Praise be to ALLAH

First and foremost, we would like to take this opportunity to express our deepest grateful appreciation to all wonderful people have continuously giving us support, advices, knowledge, understanding and contribution towards the successful completion of this Final Year Project.

In particular, we wish to express our sincere appreciation to my supervisor, Madam Norbaiti binti Sidik for encouragement, guidance, critics, advices, suggestion and motivation on developing this project including all other lecturer who helped us during the whole process of this final year project from theory until on board. They have contributed towards our understanding and thoughts.

Our sincere appreciation extends to all our undergraduate friends especially member of classmates and coursemates who have helped and shared brilliant ideas throughout the whole year.

Last but not least, we would like to express our sincerest gratitude and deepest thankfulness to our parents for their love, support and encouragement that they have given to us.

ABSTRACT

As next-generation electronic information systems evolve, it is critical that all people have accessed to the information available via these systems. Examples of developing and future information systems include interactive television, touchscreen-based information kiosks and advanced internet programs. Infrared technology, increasingly present in mainstream applications holds great potential for enabling people with a variety of disabilities to access a growing list of information resources. Already commonly used in remote control of TVs, VCRs and CD players, infrared technology is also being used and developed for remote control of environmental control systems, personal computers, and talking signs. So, we decided to do a project to control the switches in homes using an IR remote.

TABLE OF CONTENT

CHAPTER	TITLE	PAGE
	APPROVAL SHEET	**iii**
	DECLARATION OF ORIGINAL WORK	**iv**
	ACKNOWLEDGEMENT	**v**
	ABSTRACT	**vi**
	TABLE OF CONTENT	**vii**
	LIST OF FIGURE	**ix**
	LIST OF TABLES	**x**
1	**INTRODUCTION**	
	1.1 Background Study	1
	1.2 Problem Statement	3
	1.3 Objectives	4
	1.4 Scope of Study	5
	1.5 Project Contribution	6
2	**LITERATURE REVIEW**	
	2.1 Literature Review	7
3	**METHODOLOGY**	
	3.1. Methodology	9
	3.2. Block diagram	10
	3.3. Transmitter component	
	3.3.1. PIC16F84A	11
	3.3.2. IR transmitter	11
	3.3.3 Crystal oscillator	12

3.4. Receiver component
3.4.1. IR receiver 12
3.4.2. LED 13
3.4.3. Transistor 14
3.4.4. Photo module (TSOP1738) 14
3.4.5. Resistor 15
3.4.6. Capacitor 17
3.5. Soldering 20
3.6. Circuit diagram 22
3.7. Flow Chart 24
3.8. Coding 26

4 RESULTS AND DISCUSSION
4.1. Result 30
4.2. Discussion 35

5 CONCLUSION
5.1. Conclusion 38

PROJECT PLANNING 40

REFERENCES 41

APPENDIX