DESIGNED AND DEVELOPED A LOW FREQUENCY READING SYSTEM

MOHD KHAIRULZA'IM BINYAFAR

.

Final Year Project Report Submitted in Partial fulfillment of the Requirements for the Degree of Bachelor of Science (Horn.) Physics in the Faculty of Applied Sciences University Teknologi MARA

NOVEMBER 2009

This Final Year Report entitled "Designed and Developed a Low Frequency Reading System" was submitted by Mohd KhairulZa'im Bin Yafar, in partial fulfillment of the requirements for the Degree of Bachelor of Science (Hons.) Physics, in the Faculty of Applied Sciences, and was approved by

Puan Zakiah Bte Mohamed Supervisor Final Year Project Faculty of Applied Sciences University Teknologi MARA 40450 Shah Alam Selangor

Cik Farah Lyana Muhammad Khir Co-Supervisor Final Year Project Faculty of Applied Sciences University Teknologi MARA 40450 Shah Alam Selangor

 ∂

Prof. Madya Yusof Theeran Project Coordinator Faculty of Applied Sciences University Teknologi MARA 40450 Shah Alam Selangor

Prof. Madya Dr. Ab. Malik **Bin** Marwan Ali Head Programme Faculty of Applied Sciences University Teknologi MARA 40450 Shah Alam Selangor

Date: 24/1/09

ACKNOWLEDGMENT

Assalamualaikum warahmatullahi wabarakatuh......

With the name of Allah, I was very grateful to who gives me the strength and energy to me for completes this report. I would like to thanks to my supervisor Puan Zakiah Bte Mohamed. This is because, with her guide, commitment and support to me until my project done.

Beside that, I would like to thank to all of my friends who was helped me and give me an advise about my project. They got numerous reviews and kept this project on track. I really appreciate there commitments.

I am much appreciated and respect in to Puan Zakiah Bte Mohamed for her responsibility to her student to make them finish their own project according to the specific format which is state on the FSG 660 format book, and also not forgetting my co-supervisor Cik Farah Lyana Bte Muhammad Khir. Without her help, I cannot do this report.

The purpose of this project report is to develop our knowledge of electronic component and represent to me the new experience practically. Further more it's also improving my analysis skills, and built up my creativities.

I want to thanks again to all of persons whose gives me their helps.

May Allah bless all of you.

Mohd KhairulZa'im Bin Yafar

ABSTRACT

DESIGNED AND DEVELOPED A LOW FREQUENCY READING SYSTEM

The low frequency device is a great instrument to use at the jungle and other places to detect the wild life. This instrument make human easier to find the animal by detect its sound. Beside that a fire fighter or rescue team to save human in building collapse. At the same time, army can also be using this equipment in their operation in forest to detect enemy. This devices was constructed by using application of the amplifier to make it can detect the distant sound which is can be hear by human ear.

Typical low frequency device are monophonic, but this unit has a stereo audio path that helps produce more realistic sounding audio. This device can be used with headphones or as an audio source for a stereo tape recorder or a PC sound card.

This circuit also works nicely as a remote stereo audio receiver for accompanying a video surveillance system. It is capable of operating on the end of a four wire shielded cable that is more than 100 feet long. For remote operation, a set of inexpensive amplified PC speakers can be connected to the output for monitoring the sound.

TABLE OF CONTENTS

	Page
APPROVAL SHEET	i
ACKNOWLEGDEMENTS	ii
TABLE OF CONTENTS	iii
LIST OF FIGURES	v
ABSTRACT	vii
ABSTRAK	viii

CHAPTER 1 INTRODUCTION

1.1	Background	1
1.2	Problem Statement	3
1.3	Objectives	4
1.4	Significant of study	4
	1.4.1 More sensitivity in detect sound	4
	1.4.2 Portable, easy and friendly user	5
	1.4.3 Save money	5
1.5	Flow diagram of project done	6

CHAPTER 2 LITERATURE REVIEW

2.1	Introduction	

CHAPTER 3 THEORETICAL BACKGROUND

3.1	Block diagram of system flow	10
3.2	Function of low frequency device	13
3.3	Circuit operation	14
3.4	Materials	17
	3.4.1 Components list & data	17

7

CHAPTER 4 CIRCUIT DESIGN AND SIMULATION PROCESS

4.1	The circuit construction	21
4.2	Simulation procedure using TINA software	24
	4.2.1 TINA software	24
	4.2.2 Simulation procedure using TINA software	26
4.3	MULTISIM software	27
	4.3.1 The screen	27