

UNIVERSITI TEKNOLOGI MARA
KAMPUS BUKIT MERTAJAM
2003

FINAL REPORT OF DIPLOMA PROJECT

FACULTY OF ELECTRICAL ENGINEERING



DUAL-CHANNEL DIGITAL VOLUME
CONTROL

NOR HAYATI ABDUL RAHMAN

INDEXS

CHAPTER 1	PAGE
1.1 Abstract	4
1 . 2 Acknowledge	5
CHAPTER 2	
INTRODUCTION	
2.1 Background theory	7
2 . 2 Scoop of work	8
2 . 3 Objective of the project	9
CHAPTER 3	
CIRCUIT DESIGN	
3.1 Schematic diagram	10
3 . 2 Circuit explanation	11
3 . 3 Component list	12
CHAPTER 4	

1.1 ACKNOWLEDGEMENT

Assalamualaikum..warahmatullahiwabarakatuh...

In the name of Allah,the gracious and merciful, syukur Alhamdulillah, thank to Allah that gave us strength and the opportunity to complete this project, KEU 280 at the sharp time .

I would like to thank, those people that to help me finished this project. Special thanks too my supervisor, Cik Nor Azila, for her taught and advices to us for finishing this paperwork.I am very proud and lucky for her cooperation to spend her time helping and consulting us while we worked on the paper. She also gives more information about the project such as about electronic component, circuit maker simulation and so on.

I also to appreciate and like to thank to others supervisors and lecturers for their support and help me in directly or indirectly to finished this project. Their also give more information about the project. Without them may be I am cannot finished the project right now.

To my friends, thanks for cooperation and help me to finishing the report. Their give me support and spent their times to discuss about the project. Thanks to all of you.

Lastly, I also would like to thank to everybody who help us while doing this project. Thank you to all.

WASSALAM.

1.2 ABSTRACT

Final project is a part of a course structure for student in their final year. The project is compulsory to us as a final year student for Diploma In Electrical Engineering. The purpose of doing this project is to produce student main power with a very high skill and able to handle a responsibility that been given like this project. We should prepare to deliver a creativity idea and good interpersonal image to our future employee.

By doing this project it will make student used their knowledge, capability, creativity and skills to purpose create trouble shoot the project. It is because all of the theory and skills that they have learned from project will used in the future.)

The project “Dual Digital Volume Control” is a device that be used for replacing manual volume control in a stereo amplifier. This project can be testing at the amplifier likes digital radio, theatre, karaoke all-in-one stereo systems and set-top-box applications. The operation can function when it is connect to the amplifier. Amplifier is a system that can increase (amplify) the magnitude of the applied signal. So that, this project using the digital electrical device is amplifier.

The other name of dual digital volume control is LM 4811. LM 4811 capable of delivering 105mW per channel of continuous average power into a 16Ω load with 0.1% from a 5V power supply. It were designed specifically to provide high quality output with minimal amount of external components. Since the LM4811 does not require bootstrap capacitors or snubber, it is optimally suited for low-power portable systems. The LM4811 features a digital volume control that sets the amplifier’s gain from +12dB in 6 discrete steps using a two-wire interface. The unity-gain stable LM4811 also features an externally controlled, active-high, micropower consumption shutdown mode. It also has an internal thermal shutdown.

INTRODUCTION

2.1 BACKGROUND THEORY

Nowadays, most of us use the equipment or electric devices by new functions. So the project 'Dual channel digital volume control' is a device that be used for replacing manual volume control in a stereo amplifier. This project can be testing at the amplifier like digital radio, theatre, karaoke all-in-stereo systems and set-top-box application. The dual channel digital volume control are using the IC 4066, IC 193 and timer 555. Its also using the component like resistor and capacitor. The dual channel digital volume control can function when it is connect to the amplifier. It is function with digital segment. Amplifier is a system that can increase (amplify the magnitude) of the applied signal. So that, this project using the digital electrical device is amplifier. The other name of dual channel digital volume control is LM 4811.