

## **ABSTRACT**

Audio recording system has many requirements to make a high quality record. One of the most important requirements is the absence of noise during the recording sessions. In the present moment, digital signal processing technology has flourished and developed vastly. With the ongoing development, a device can be created to enhance the quality of audio recording systems.

This final assignment is made to design a quality enhancement system for audio recording with the usage of wavelet noise reduction and gain adjustment methods. The two methods are used simultaneously in the hope of creating a simple yet effective device. The wavelet noise reduction can eliminate noise generated from other sources of audio. The desired amount of noise for elimination can be configured through the usage of threshold in the noise reduction process. If the noise reduction output was not satisfactory in terms of signal power, the gain adjustment method can amplify the signal power.

This application is expected to be able to reduce noise often found in various audio records which was created in a less than ideal condition. It is also expected to be able to be a helpful tool in the analog to digital conversion of audio records.