

## ABSTRACT

Most of the problems that we found on audio application is noise. Aside from audio, some examples like industrial area, transportation, and broadcast also familiar with this problem. Noise can be very uncomfortable for your hearing and even can damage your eardrum.

*Active Noise Control (ANC)* is one of the techniques noise reduction which is quite effective to use. In principle, the mechanism of ANC is by producing feedback signal from input signal. When the input signal and the feedback signal are superpositioned, they will cancel out each other, so the noise will be suppress or even gone.

This final project started with taking input sampling sound frequency from speaker using the microphone sensor that will be processed in Raspberry Pi. It will produce an output feedback signal or anti-noise from sound frequency and come out from other speaker. The results from the system is the average of the noise attenuation value which is 19.11 dB at 396 Hz (frequency), 18,67 dB at 530 Hz, and 10,41 Hz at 1500 Hz where the distance is 13 cm.

**Keywords:** *Active Noise Control, noise reduction, speaker, anti-noise.*