

Thesis Title	A Study Of Performance Of Noise Reduction Using Antiphase Frequency Type Feedback Control.
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ABSTRACT

This thesis studies of the performance of noise reduction for the phase cancellation by using antiphase frequency type feedback control or Active Noise Control or ANC System. This system has the signal processing works by microcontroller board. An acoustic signal which it is feedback into the microcontroller board is the comparator of noise released and the microcontroller board will do the acoustic signal compensation for phase cancel of noise again. The acoustic signal compensation of microcontroller board creates the wave which its frequency, amplitude, velocity of sound and wavelength value is equal to the noise wave adding with the ability of marking the shift phase about 180 degrees in order to be the highest efficient in phase cancellation of both wave. In the experiment, we change values of noise wave from 100 Hz to 1000 Hz frequency input to the lab equipment, for concluding of which frequency interval is the most effected to zone cancellation. The result finding, though the frequency and distance of speaker decrease, the zone cancellation and performance of noise reduction will be increase. It is also good for reducing noise in low frequency bandwidth, but there must be the noise with linear motion wave or still be consistent frequency.