

Noise Cancellation Device

TECHNOLOGY DESCRIPTION

This technology is a device to invade noise pollutions by providing noise cancellations around people and their infants to help individuals and parents to accomplish improved sleep and quality personal time.

TECHNOLOGY FEATURES

This technology is a portable Active Noise Control (ANC) system positioned near the baby court so the mother can hear the baby crying. This technology is cheaper than sound barrier and is aesthetically pleasing than those available in the market. There is no space constraint; and the technology helps to lower 6-20 decibel noise.

ADVANTAGES

- Employs cheaper amplifier and loudspeaker
- Simple setup
- Cost effective

INDUSTRY OVERVIEW

Prospect Industry: Headphones and Earphones Electronics Industries, Infant Care Industries

These products employ novel nonlinear ANC algorithm and automatic tuning without technical assistance. The Portable ANC System for Sleep Comfort and Portable ANC System for Infant Care provide noise cancellation to help individuals and infants get better sleep, thus quality rest. Meanwhile, the Experimental Apparatus to Teach Control Engineering will help students in understanding and comparing the advanced control concept. Competition for these products would be ANC headphones or earphones, which interrupts head movement during sleep. The expected target markets for these inventions are consumers who have sleeping problems due to noise, parents of newborns, infants and hospitals with neonatal ICUs. These products can be distributed locally to major retailers and baby care industries such as Mothercare and Anakku as a means to reach the final consumer. Expected demand for this would be relatively high because there are currently no similar products in the Malaysian market. The market for conventional earphones and headphones are continuously rising. Earphones and headphones market size is expected to reach USD 18.20 billion by 2023; as per a new research report by Global Market Insights, Inc. Short replacement cycle of these products owing to the changing fashion, functionality, and damage or loss may lead to high industry growth. Direct competition include Sennheiser Electronic, Beats Electronics and Bose which are continuously carrying out product development and innovation initiatives that are likely to revolutionise the industry scenario. Consumer preferences for enhanced experiences without noise distortion will aid demand for these products over the forecast timeline.



Assoc. Prof. Ir. Dr. Raja Mohd Kamil Raja Ahmad
Faculty of Engineering