

19 July 2024

**Press Release Immediate Release**



## **Noizend Demonstrates Effective Low-Frequency Noise Cancelling at UTS Sydney, Australia**

Noizend Pty Ltd, an emerging leader in low-frequency noise control, has made a major step forward in reducing low-frequency noise pollution. Together with our colleagues at the University of Technology Sydney (UTS) an experiment was successfully carried out at UTS Centre for Audio, Acoustics and Vibration which is their state-of-the art experimental facility at Botany.

The experiment was carried out by Dr Sipei Zhao, Senior Lecturer, UTS School of Mechanical and Mechatronic Engineering Faculty of Engineering and IT.

This experiment was a demonstration of single-channel active noise control (ANC) system at UTS hemi-anechoic chamber for low-frequency noise reduction. An oscilloscope generated a low-frequency tonal signal at 150 Hz that was played through a speaker. A microphone picked up the sound wave which was analysed and the system created an anti-noise sound wave which was played through another speaker to reduce the primary low-frequency noise.

Our experiment was successful with a low-frequency noise reduction of 20 - 30 dB in this controlled environment <https://youtu.be/ftTkt85rhXs>.

### **Quote from Paul Monsted, CEO and Managing Director of Noizend:**

“This is a vital step forward for Noizend in our quest to make the world quieter by reducing excessive low-frequency noise. The key factor was that there was a reasonable distance between the noise speaker and the other speaker creating the anti-noise to cancel part of the noise sound wave.”

### **Quote from Dr Sipei Zhao, Senior Lecturer at UTS:**

"Experimental results showed that, for the tonal signal noise at 150 Hz, a noise reduction of 20 to 30 dB was achieved at the error microphone, which fully demonstrated the feasibility of ANC for low-frequency noise reduction. It is noted, however, that this result is obtained in an ideal environment for a tonal signal at a single spatial point where the error microphone is placed."

### **About Noizend Pty Ltd**

Noizend Pty Ltd is a new Australian company established to reduce chronic low-frequency noise that adversely affects everyone. Noizend was established to extend the science of active noise control (as proven and applied in noise cancelling headphones) for the world. For more information, visit <https://www.noizend.com/>.

### **About the University of Technology Sydney**

The University of Technology Sydney is one of the top 100 universities in the world and a leading public university of technology with global impact. Visit [discover.uts.edu.au](https://discover.uts.edu.au) to learn more.

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