

Breaking the barrier of speech understanding in noise

Boosting the signal-to-noise-ratio (SNR)

The SNR is a measure that compares the level of a desired signal to the level of background noise. It's expressed as a ratio, often in decibels (dB), and indicates how much stronger a signal is compared to the noise. In audiology, the SNR is measured by determining the ratio between speech and background noise. Individuals with hearing loss often require a higher SNR to understand speech.



Low SNR The noise is comparable to or greater than the signal, resulting in poor performance and possible loss of information.



High SNR The signal is clear and easy to distinguish from noise, leading to better system performance and accuracy.

SNR in hearing technology: every dB counts

- Every 1 dB of SNR leads to 8-10% improvement in word recognition.¹
- For every 10 dB of hearing loss, a wearer requires an additional 1-3 dB of SNR to maintain their unaided intelligibility.²



While modern hearing aids achieve SNR improvements of up to 6 dB, to significantly improve speech intelligibility, they must separate speech (the signal) from background noise (the noise) in real time and suppress the noise. Current industry standard chip technology does not have the processing power to perform these complex tasks.

How Phonak Audéo Sphere™ Infinio makes the difference

The new AI-powered Phonak Audéo Sphere™ Infinio hearing aids feature the first Deep Neural Network (DNN) chip designed to instantly separate speech from all-round noise, delivering an unmatched SNR improvement of up to 10 dB.

Patient benefits of the 10dB SNR improvement:

2-3 times more likely to understand speech in noise⁴



Boosted speech clarity even in noisiest environments³

29% less listening effort, resulting in 21% less fatigue at the end of the day⁵

Phonak Audéo Sphere™ Infinio



At Triton Hearing, we are committed to providing patients with the best possible hearing experience, considering their personal needs and preferences when evaluating the optimal hearing solution.

Our customers can rely on an extensive individual assessment, counseling, and education on hearing loss and how treating hearing loss can improve many aspects of their lives.



With the latest AI-powered hearing aids at hand, we can now even break the barrier of understanding speech in noise, addressing one of the biggest remaining challenges for hearing aid users: speech clarity in loud environments. Let us help boost the hearing and overall health of your patients, too.

¹Taylor, B., & Mueller, G. (2017). Fitting and dispensing hearing aids (2nd ed.). Plural Publishing. 2 Dillon, H. (2012). Hearing aids (2nd ed.). Thieme Publishers. 3 Rauber, S., Kohlhauser, P., Jehle, F., Kühnel, V., Preuss, M., Hobi, S. (2024). Spheric Speech Clarity proven to outperform three key competitors for clear speech in noise. Phonak Field Study News. Retrieved from www.phonak.com/evidence 4 Wright, A., Kuehnel, V., Keller, M., Seitz-Paquette, K., Latzel, M. (2024). "Spheric Speech Clarity applies DNN signal processing to significantly improve speech understanding from any direction and reduce the listening effort." Phonak Field Study News retrieved from <https://www.phonak.com/evidence> 5 Latzel, M., Heeren, J and Lesimple, C. (2024) „Speech Enhancer reduces listening effort and fatigue." Phonak Field Study News retrieved from www.phonak.com/evidence