

# iSense

Transforming education for children  
with autism spectrum disorder





**Learning** • Every child deserves the chance to learn effectively. A crucial starting point is being able to clearly hear the speaker. The more easily a child can focus on the teacher's words, the better the learning that can occur.

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## Educating through the noise

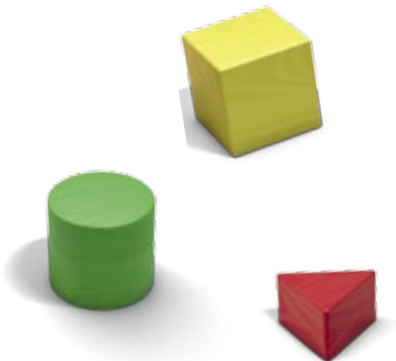
Autism spectrum disorder (ASD) has a huge impact on the lives of the children it affects, especially their learning.

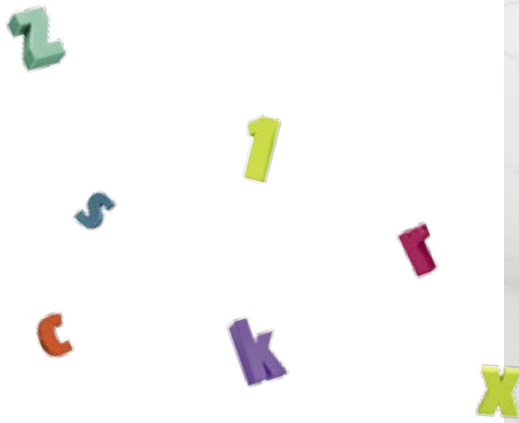
Studies have found that children with ASD particularly struggle in noisy environments<sup>1</sup> like classrooms. They are often unresponsive and they find it difficult to pay attention to auditory stimuli such as the teacher's voice (the most significant predictor of educational performance<sup>2</sup>).

However one solution has been scientifically proven to help.

<sup>1</sup> Ornitz et al. 1989, Alcantara et al. 2004

<sup>2</sup> Ashburner et al., 2008





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## The FM answer

Personal 'FM systems' feature a microphone, worn by the teacher, and one or two discrete in-ear receivers, worn by the child.

These systems pick up the teacher's voice and transmit these speech sounds directly into the child's ear (via their receivers).

The result? The child is better able to hear, concentrate on, and respond to the words they hear.



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## Proven educational benefits

Scientific studies have proven the positive effects of FM technology on the classroom performance of children with autism spectrum disorder.

**“In our six-week study of school-aged children with autism spectrum disorder, FM systems provided significant listening-in-noise, communication and educational benefits. Children could hear the teacher’s words better, communicate with their fellow students better and were generally more engaged in classroom activities than without the FM. Most of the children also wanted to keep using their FM devices after the trial had ended.”**

Gary Rance (PhD), Associate Professor, Department of Audiology & Speech Pathology, The University of Melbourne – Co-author of ‘The Use of FM Technology in school-aged children with Autism Spectrum Disorder’

**“Our study found that using FM systems significantly improved the speech recognition in noise of children diagnosed with ASD and/or ADHD. We recorded significantly more on-task behaviors and students were able to pay better attention in noisy classrooms when using FM. It was also easier for the teacher to capture the attention of these students.”**

Erin C. Schafer – Co-author of ‘Personal FM systems for children with autism spectrum disorders (ASD) and/or attention-deficit hyperactivity disorder (ADHD): An initial investigation’, Journal of Communication Disorders 46 (2013) 30–52





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## Loved by children and teachers alike

The subjective comments these study leaders received from children and parents were equally positive:

- All the children liked using their FM systems and thought these helped them to listen
- 9 out of 10 children wanted to continue using their FM systems after the trial
- Teachers reported that children with ASD paid better attention in noisy rooms when using FM
- Teachers also found it easier to get the children's attention when using FM



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## The Phonak solution

Today, iSense Micro by Phonak is the preferred choice for children with ASD in class. This receiver runs on Dynamic FM, the leading FM technology by Phonak, and is available in a choice of colors.

When used with a Phonak microphone, it improves the signal-to-noise ratio – the difference between the teacher’s voice and the surrounding noise level – to make the teacher’s words stand out against this noise. As a result their speech sounds clearer and is easier for a child to understand.



This makes a major difference to a child in class, easing their struggle to hear and concentrate when noise levels increase, and enabling more real learning to occur.

**Every child with ASD deserves the chance to enjoy a successful education.**



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