

Oticon ♦ Safran



child
friendly
hearing
care



A child's surest path to speech

oticon
PEOPLE FIRST

The Safran certainty – Clear

The goal of any paediatric fitting is to help children develop their language and communication skills. This requires unrestricted access to speech – as well as any other sounds the child needs to hear.

With the new Oticon Safran you can introduce the child to a more detailed sound picture than they've ever experienced before. Artificial Intelligence makes Safran powerful enough to capture ALL of the most important sounds – and smart enough to automatically adjust the amplification whenever the need arises.

And with its unique data-logging function, Safran Memory, Safran shows you exactly how the automatic features are working, so you know with 100% certainty that they are benefiting the child.

In other words, Safran makes automatics child-friendly!



and consistent access to speech



MAKING the automatics child-friendly

Safran provides consistent access to speech and other important sounds with the aid of Artificial Intelligence (AI). With AI there are no preset reactions, the situation and processing options are evaluated in real time. And automatic changes are made **ONLY** when they can significantly improve the signal-to-noise ratio.



PROVING the automatics are child-friendly

Safran's built-in data-logger, Safran Memory, dispels any doubts that the automatic features are meeting the child's needs. The data gathered shows you exactly how and when these systems are being deployed, thereby confirming that the processing decisions are the right ones.



DSL v5.0: The new paediatric standard

Safran is one of the first hearing aids in the world to feature the new DSL v5.0 rationale. This dedicated paediatric rationale maximizes audibility and ensures comfortable loudness of all speech cues in **ALL** listening situations.



Fitting tools: Designed with children in mind

Taking the child's age and ear anatomy into account, Oticon's highly flexible fitting software, Genie, automatically defaults to paediatric settings as a perfect starting point for the fitting. Genie's counselling tools help you demonstrate to parents that their child is receiving the necessary support.



Designed for full FM compatibility

Noisy classrooms present all sorts of challenges for a child trying to listen and learn. By effectively shortening the distance between teacher and child, FM systems help children to conserve their energy and focus on the task at hand. Naturally, Safran is fully compatible with FM systems.



Making the automatics child focused

Artificial Intelligence (AI) supports the child by evaluating each listening situation, comparing the options, and activating all the right features...

Adjustments you can rely on

Safran uses real-time parallel processing to make the right decisions for the child. AI compares all the processing options and automatically selects the most speech-friendly combination of settings – and only makes adjustments when necessary. So the child will always gain consistent access to speech and any other stimulating sounds in their environment.

Features you can trust

Noise Management and TriMode Adaptive Directionality are two of Safran's most important AI-controlled features. The Noise Management system reduces the annoyance of noise without affecting the speech cues the child needs to hear. And TriMode Adaptive Directionality enhances voices without reducing background sounds that might actually contribute to the learning process.

Speech – and safety

Safran might reduce noise in order to enhance speech, but it would never rob the child of the ability to hear crucial sounds such as the rumble of an approaching bus, the beeping of a car horn or other warning signals. With Safran, safety and the ability to localize sounds are high priorities too.



Proving the automatics are child-friendly

Safran's data-logger, Safran Memory, provides the verification you have been seeking of the benefits of automatic systems for children...



One week's application of TriMode Adaptive Directionality for a 10-year-old boy

Verification that Safran is working as it should

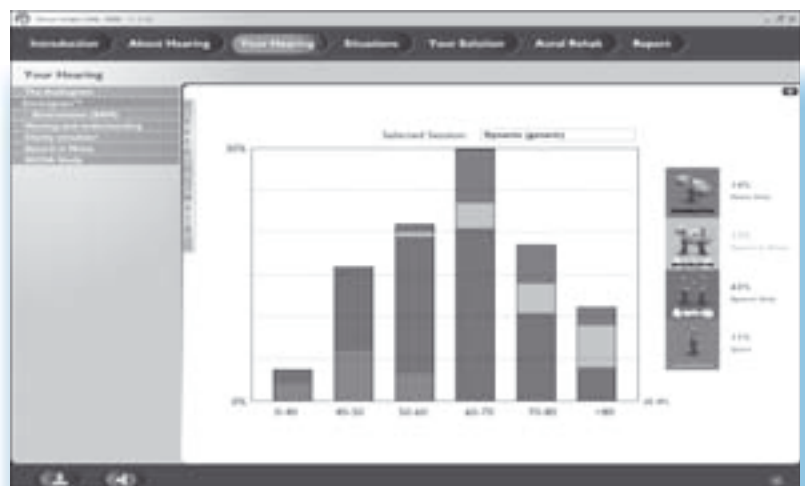
Safran Memory confirms that the automatic, AI-controlled TriMode Adaptive Directionality and Noise Reduction features are being properly applied at all times. It shows that these systems are only active in loud or complex environments, when they can offer better audibility and access to speech.

Day-long tracking of instrument usage

As well as tracking the activity of Safran's automatics, Safran Memory monitors the number of hours the Telecoil, DAI/FM system and the Volume Control have been in use. All to help you verify that the automatics are reacting appropriately and that the instrument is being used correctly, all day long.

Detailed insight into the child's sound universe

The Safran Memory also registers how much time the child has spent in different sound environments. This data can be turned into an "Envirogram". When dealing with children who have difficulty articulating their needs, you won't be forced to speculate; the Envirogram shows you precisely where the focus needs to be.



Envirogram from a 10-year-old boy's week



DSL v5.0

– the new paediatric standard

The DSL (Desired Sensation Level) rationale is the leading rationale for fitting instruments to children. It supports today's most advanced instruments and helps you meet the demand for fitting increasingly younger children.

Developed at the University of Western Ontario (Canada) – and supported by years of research and paediatric fitting experience – the new DSL v5.0 rationale keeps speech cues audible and comfortable in all listening situations. Maximizing these cues is crucial – particularly when speech acquisition, communication skills and academic performance are at stake.

More high frequency information

Consistent with the DSL approach of providing as much audibility as possible – and with recent research performed at the Boys Town National Research Hospital* – Safran offers a very wide bandwidth. Its frequency range goes all the way up to 7200Hz.

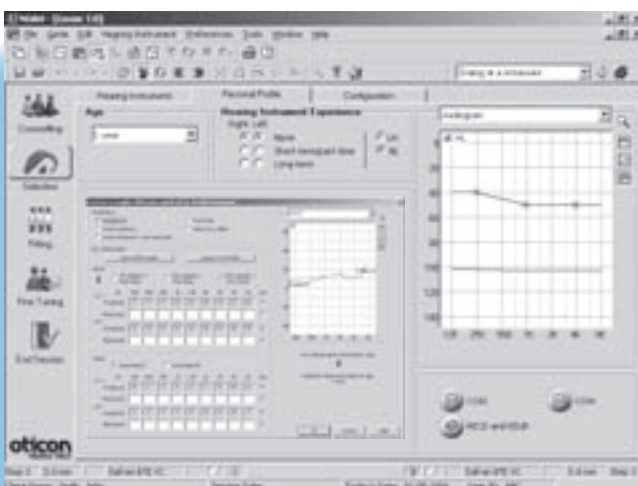
In addition to improving the sound quality the expanded bandwidth provides access to vital high frequency speech cues such as 's', 'sh', and 'th'. This helps to improve speech intelligibility once language skills have been acquired.

* Stelmachowicz PG, Pittman AL, Hoover BM, Lewis DE, Moeller MP. (2004). "The importance of high-frequency audibility in the speech and language development of children with hearing loss." Arch Otolaryngol Head Neck Surg. 130(5):556-62.

Fitting tools

– designed with children in mind

Fitting children can be challenging in more ways than one. Understanding this, Oticon offers all the tools necessary for safe and easy fittings.



Genie offers the choice of using predicted or measured RECD values

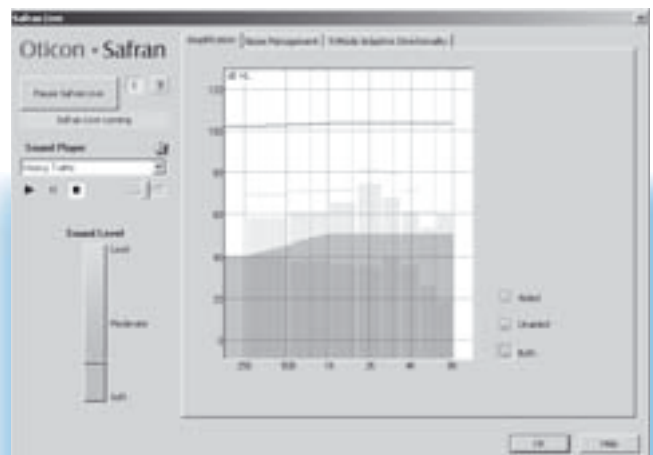
Built-in fitting considerations

The new Genie 7.0 fitting software simplifies the fitting process, either by offering paediatric values or by inviting you to enter measured data such as Real Ear to Coupler Difference (RECD). Genie automatically recognizes the specific measurement techniques used, and it always takes the child's age into account when prescribing gain and output.

Live fitting tools

Sounds from the popular auditory training CD, "Otto's World of Sounds" are included in the Safran Live fitting tool and the Oticon Sound Studio. These two tools help you demonstrate to parents and teachers how Safran instantly reacts to environmental changes and speech.

To support family-centred counselling, Oticon also provides Children's Outcome Worksheets (COW) – a COSI-based outcome measure.



Safran Live provides insight into the functionality of the instrument with the following panels: Amplification, Noise Management and TriMode Adaptive Directionality



All	250	750	1.5k	2k	3k	4k	5k	7k
MPO	87	102	103	99	104	102	98	95
Loud	6	11	11	21	14	13	14	12
Soft	19	25	28	36	30	27	28	30
Right								
CR								
Left								
All	250	750	1.5k	2k	3k	4k	5k	7k
MPO	87	102	103	99	104	102	98	95
Loud	6	11	11	21	14	13	14	12
Soft	19	25	28	36	30	27	28	30

Eight channels for easier matching of the child's target amplification levels

Fitting flexibility for more speech and audibility

Safran's eight compression channels help you to match the child's target amplification levels and provide more audibility and speech intelligibility in any environment the child is likely to encounter.

Safran offers separate gain adjustments for soft and loud input levels, plus MPO in each channel. This allows you to place all speech within the child's dynamic range.

Effective elimination of feedback

Children need access to all kinds of sounds, but they also need protection from feedback. Safran provides this with one of the most powerful feedback eliminators available: the Dynamic Feedback Cancellation system.

Safran's Dynamic Feedback Cancellation system eliminates feedback without reducing gain or distorting the signal. This approach ensures consistent audibility throughout the day.

FM made friendly

Recognizing that most of a child's education takes place at school, Oticon also produces FM solutions. These wireless voice transmission systems give children an extra boost - especially in noisy environments. In modern classrooms students using hearing aids are very dependent on FM, because up to 90% of all information is communicated verbally.



Just like hearing instruments, FM solutions must be user-friendly and utterly reliable. Whether they are units for schools or devices for the home, these solutions help to give young hearing aid users exactly the same opportunities as everyone else.

Naturally, Safran is fully compatible with most FM systems, including the Oticon Amigo FM solution. It will detect the Amigo receiver automatically when this is turned on and add two dedicated FM programs.

Safran used in combination with Amigo FM provides a unique solution offering a child the benefit of FM - not only in school but also at home.

Accessories

Built to last

All Safran BTE instruments have optional, robust, tamper-resistant battery doors and volume controls for maximum safety and consistent performance. And with components that are built to last, Safran fully supports a child's active lifestyle.

Special accessories

Safran's child-friendly accessories include the two sizes of hooks (damped and un-damped), plus left and right instrument markers. Easily inserted into the battery door, these markers remain firmly in place, so the child can always differentiate between the two instruments.

A wide range of colours

Safran is available in a wide range of colours, including baby pink and baby blue, the new exclusive chroma colours, Oticon's cool colours and our standard hair tone colours.



A child's companion to speech

Oticon Safran offers you a unique chance to help children with hearing loss achieve their full potential. Safran is a solution with a difference: its intelligent automatics and data-logging function provide performance AND verification in one instrument.

Safran's child-friendly benefits include:

- **A rich and vibrant sound picture**
- **Maximum audibility of speech in ALL situations**
- **Automatic adjustments whenever necessary**
- **Speech-friendly noise reduction**
- **Directional technology for speech AND safety**

These unique benefits make Safran one of the best possible companions on a child's path to speech.



People first



We believe that it takes more than technology and audiology to create the best hearing instruments. That's why we put the individual needs and wishes of people with hearing loss first in our development of new hearing care solutions.