# junior

The Phonak portfolio of pediatric hearing delight Young lives, bright futures

**PHNAK** life is on

# Spice +

The freedom to enjoy life to its fullest extent is every child's right, regardless of age and degree of hearing-loss. At Phonak our goal is to give every hearing impaired child every opportunity to make the most of their potential. With this in mind we developed a portfolio of the very best pediatric hearing solutions. In this portfolio we offer a hearing solution that can be considered "the perfect companion," every step of the way, on their journey through a childhood of hearing delight.



## Solutions for today, with the future in mind

A fundamental requirement for achieving a successful first fit and facilitating long-term benefits is the ideal balance between audibility, intelligibility and sound quality. It has always been our fitting philosophy to provide the best possible speech intelligibility while offering a pleasing overall sound experience. All of our hearing aids leverage our unmatched research and development capabilities. The enhanced Spice+ Technology provides the best collection of features and options for the specific needs of young ears. Take a look at what it has to offer and how it will benefit children of all ages regardless of the degree of hearing loss.

The Phonak pediatric hearing solutions include an essential and unique feature set: Nonlinear frequency compression, enhanced feedback suppression, superior directionality, optimal Dynamic FM compatibility and water resistance.

# The new Nios S H2O, effortless hearing in a WaterResistant micro-BTE design

The ideal solution for children with a mild to severe hearing loss. The Nios S H2O comes in a new, microsize and WaterResistant housing.

# Naída S, when children need power and outstanding audibility

The leading pediatric power hearing solution for children with moderately-severe to profound hearing loss.

# External receiver solutions for young adults who want cool cosmetics

The new Naída S CRT and the Audéo S SMART offer feature-packed, discreet and esthetically pleasing options, designed to meet the lifestyle needs of young adults.





# Nios S H<sub>2</sub>O

Performance and dependability for young lives

It is often assumed that children with milder hearing losses do not experience limitations in understanding and producing speech. The reality is that sufficient audibility in the high frequencies is often inconsistent and hearing in noise is a continuous challenge. The new Nios S H2O has been designed to address these limitations. It provides invaluable support to children, allowing them to enjoy a more effortless hearing experience.

### Enhanced audibility

Consistent high-frequency audibility, essential for speech and language development, is not always accessible for children with mild to severe hearing loss. Discover how SoundRecover provides natural sound and consistent access to high frequencies.

### Small

Size should never compromise hearing performance. The new Nios S H2O delivers a comprehensive package of features in the smallest possible design.

### WaterResistant

Children love water; whether it's at the pool, jumping in puddles after the rain, or simply splashing about in the bath. Nios S H2O, with its superior WaterResistant design, allows them to do whatever they want, whenever they want, without compromising their hearing.

#### Spice+ performance

Nios S H2O is based on the state-of-the-art Spice+ Technology. With a host of benchmark features it offers everything a child needs for optimal hearing performance. Combined with a palette of connectivity options children are set up for today, tomorrow and the future.

> "I love bath time because I get to play with bubbles"



Consistently more audibility even for mild to moderate hearing loss

It is well documented that, even when identified and amplified early, mild to moderate hearing loss can have a detrimental impact on a child's speech and language development. It is also generally overestimated how much high frequency audibility a conventional extended bandwidth hearing instrument can provide. That is why nonlinear frequency compression is so important. It delivers consistent access to meaningful high frequency information that would otherwise not be audible.



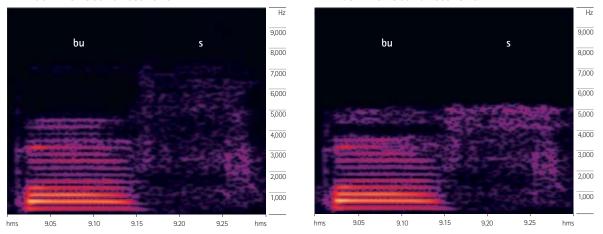
SoundRecover

## The limits of extended bandwidth amplification

Research has shown that current hearing aid receiver technology cannot provide sufficient gain for inputs beyond 6 kHz. Similarly, output response curves show that the level of high frequency energy from 6-10 kHz is relatively low. The consequences are that speech can lack clarity and high frequency information is not consistently provided. This can impact a child with a mild to moderate hearing loss in a number of ways including delayed speech and language development and misunderstanding the context of conversations.

B. "Bus" with SoundRecover on

#### Audibility of /s/ with SoundRecover off/on



#### A. "Bus" with SoundRecover off

Graph: The spectrograms above show the audibility of the sound /s/. A Nios S H2O, programmed with DSL v5 pediatric prescription was tested with a 65 dB input of the word "bus." The brighter purple color that represents the /s/ shows improved audibility when SoundRecover is on (B.) vs. SoundRecover off (A.).

## Why SoundRecover works, even for a mild hearing loss

The advantages of SoundRecover for children with severe to profound hearing loss have been widely accepted. Since the introduction of SoundRecover for children with a mild to moderate hearing loss, many pediatric audiologists have been impressed by the results. The reason for the improved performance of these children is added clarity and consistent exposure to all high frequency sounds. A prime example of the importance of high frequency audibility is the detection and recognition of a mother's /s/ sound.

It is important to understand that the amount of frequency compression applied is directly proportional to the degree of hearing loss. This means that for mild to moderate hearing losses, SoundRecover settings provide the minimal degree of frequency compression necessary for high frequency audibility. This ensures natural sound quality and maximum audibility.

The brain is the final step to the conscious perception of sound. When the brain is unable to access the full spectrum of sound, the development of the auditory pathways can be affected. When this happens, a child will not always be able to attach meaning to a perceived sound. As audibility of high frequency sounds is ensured with SoundRecover, the link between sound and meaning is much stronger.

SoundRecover allows consistent exposure to high frequency speech sounds which can take the effort out of listening as they can recognize these sounds as meaningful speech.

#### More background reading

Completed independent research on SoundRecover and its benefits for children can be found on: www.phonak.com/soundrecover

- McCreery, R. (2010). Small ears, BIG decisions. The Hearing Journal, 63(7), 10-17.
- Stelmachowicz, P., Pittman, A., Hoover, B., Lewis, D., & Moeller, M. (2004). The Importance of High-Frequency Audibility in the Speech and Language Development of Children With Hearing Loss. Archives of Otolaryngology - Head & Neck Surgery, 130, 556-562.
- Stelmachowicz, P., Pittman, A., Hoover, B., Lewis, D. (2001). The effect of stimulus bandwidth on the perception of /s/ in normal- and hearing-impaired children and adults. Journal of the Acoustical Society of America, 110(4), 2183–2190.
- Pittman, A., Lewis, D., Hoover, B., Stelmachowicz, P. (2005).
  Rapid word learning in normal-hearing and hearing-impaired children: Effects of age, receptive vocabulary, and high-frequency amplification. Ear and Hearing, 26, 619-629.
- Moeller, M. (2008). Access to high frequencies: Consequences for language development, Pediatric Conference on Amplification Solutions, Brighton.
- Pittman, A. (2010). High-Frequency Amplification: Sharpening the Pencil. A Sound Foundation Through Early Amplification (pp. 179-185), Chicago.
- Testimonials on SoundRecover by leading pediatric experts, parents and children can be found on www.youtube.com/phonakpediatrics

"I love mummy reading me a story before bedtime"

# Spice +

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# Naída S The foundation of power hearing

Children with a moderately-severe to profound hearing loss need the most sophisticated solution available to them, rather than mere amplification. That's why Phonak developed Naída S: to bring children new levels of hearing delight and a foundation for their future hearing abilities. Suitable for children of all ages, and available at three price and performance levels, Naída S is today's leading pediatric power hearing solution.

#### More hearing – further enhanced

What makes Naída S the best choice for pediatric power hearing are Phonak benchmark features such as SoundRecover and WhistleBlock, which combine to deliver exceptional audibility.



**SoundRecover** Gives more highfrequency audibility

Enhanced SoundRecover in Naída S allows access to frequencies above 8,000 Hz, even on the rare occasion when the lowest cut-off frequency is selected. Within the power family, models include the SuperPower (SP) and UltraPower (UP), both of which are available in the proven WaterResistant Naída design. Naída S delivers even more hearing to those children who need it most. Discover the power of Naída S.



WhistleBlock First for feedback cancellation

WhistleBlock suppresses feedback only as and when it occurs. Fully adaptive, it continuously applies just the right amount of suppression to suit any and every situation that a child experiences.

## Flexibility every step of the way

Children's needs change and expand as they grow and that also applies to their hearing development. The Phonak pediatric portfolio is designed with the different stages of a child's future in mind, allowing for each step to be taken in its own time.

SoundRecover and WhistleBlock ensure optimal audibility in both Nios S H2O and Naída S. The next important step is to enable communication even in the most challenging environments. Spice+ Technology within the Phonak pediatric portfolio gives children the very best opportunity to maximize their hearing and to lead an enriched life. Take a look at what Spice+ Technology has to offer.





UltraZoom Directional microphone technology reinvented

Directional microphone technology is a proven

adaptive multichannel beamforming technology,

in background noise. UltraZoom is the new

automatically available in SoundFlow or in a

suited for older children who move from one

noisy environment to the next. Sophisticated microphone matching and calibration in UltraZoom

ensures optimal long-term performance of the



NoiseBlock High resolution noise cancellation

Children often find themselves in noisy situations, method of effectively improving speech intelligibility therefore a reliable solution is required to effectively manage everyday noise. Thanks to the increased processing power of Spice+ Technology, NoiseBlock is now faster and more accurate than ever before. manual program. This adaptive beamformer is ideally Gain is decreased without delay, and only in channels with a poor SNR, so noise is suppressed without reducing essential speech information. This means children's understanding in noise is not compromised.



dual-microphone technology.

SoundFlow

For more demanding and fast-changing environments

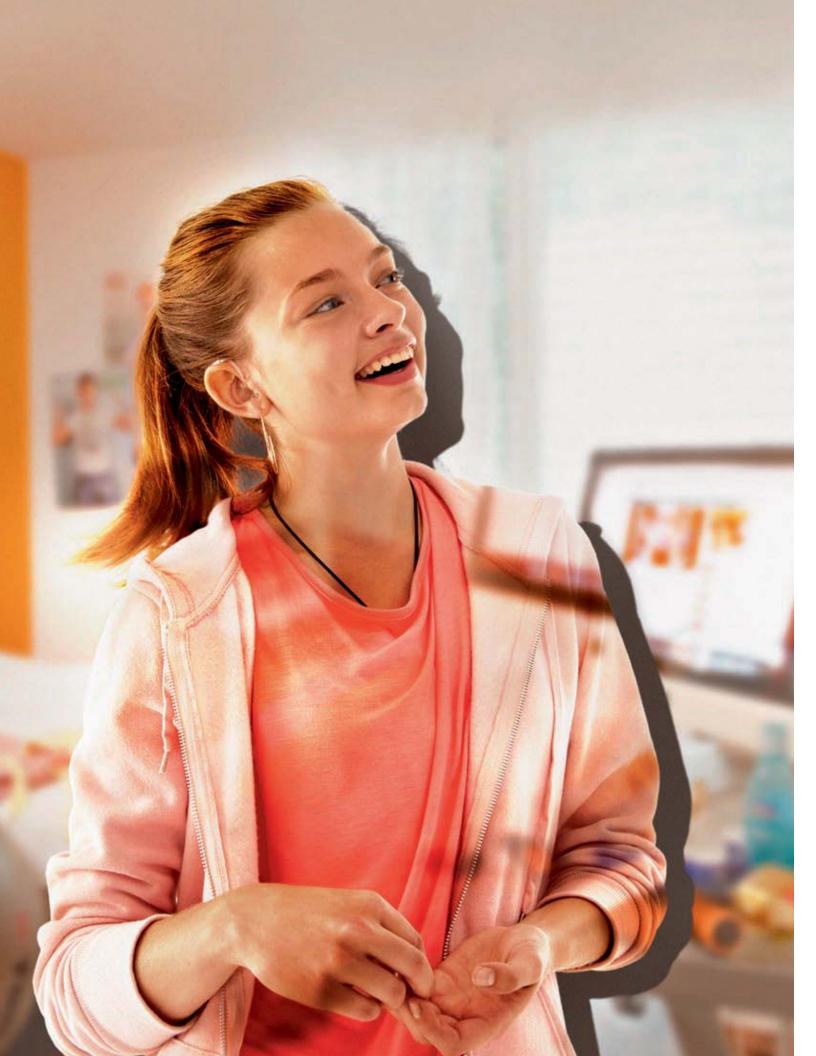
As a result of the increased processing power of the Spice+ chipset, the second-generation SoundFlow employs a high-definition, multidimensional soundclassification system. As children grow, their exposure to complex environments increases. The enhanced SoundFlow allows for increased accuracy in the identification of subtle changes in the environment, optimizing the feature set for every situation.



Real Ear Sound Natural ear acoustics

Spatial cues important for natural hearing are affected when a hearing instrument is worn behind a child's ear. Real Ear Sound creates frequency-specific directionality to restore natural sound localization for the child.

> "I enjoy chatting with my friends down at the shopping mall"

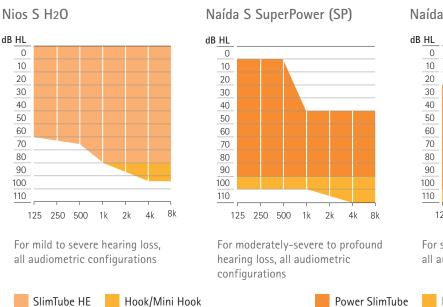


## Cool cosmetics teenagers will appreciate

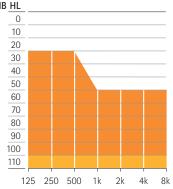
All too quickly a young child becomes a young adult. The performance of a hearing instrument is always important, however, teenagers are often equally concerned with the appearance of their device. To meet these needs, Phonak offers a versatile range of acoustic coupling options that are esthetically pleasing.

For teenagers, a slim tube can be an option regardless of the degree of hearing loss. For mild to moderatelysevere hearing losses, the Nios S H<sub>2</sub>O can be fitted with a SlimTube and dome or a SlimTip.

For those with a moderately-severe to severe hearing loss Naída S offers the world's first Power SlimTube. Fitted with a standard earmold it provides cosmetic advantages while minimizing gain and output loss.







For severe to profound hearing loss, all audiometric configurations

Hook/Mini Hook



## Always ready for the unexpected

Children approach life in a playful, carefree way. Babies explore the world around them, school age children like to push boundaries and teenagers' lives are full of diverse activities. At any stage a Phonak hearing instrument is there for limitless adventures.



### WaterResistant

A "perfect companion" no matter what, where or when

Our pediatric solutions are robustly designed, with a child's sense of adventure in mind. The water- and dirt-resistant housings of Nios S H2O\* and Naída S\*\* are "perfect companions" for children. They can get on with their activities, with hearing performance they can rely on.

### Peace of mind for parents

The unique and very effective tamper-proof solutions in both Nios S H2O and Naída S keep little fingers from accessing the battery and keep it securely in place. At the same time it allows the hearing instrument to be turned on and off without the use of a tool.

- Nios S H2O has an IP67 rating; this indicates it was not damaged beyond repair after 8 hours in a dust chamber, nor after being immersed in 1 meter (3 feet) for 30 minutes
- \*\* Naida S SP/UP have an IP54 rating; this indicates neither dust nor splashing water from any direction for 5 minutes had a harmful effect on the device

"I can do everything I want"



## Designed to impress

Phonak offers two Canal-Receiver-Technology (CRT) options for older children. These impressively sleek wireless devices combine with a palette of connectivity options, in the smallest possible housings. This makes for a very popular choice for teenagers.

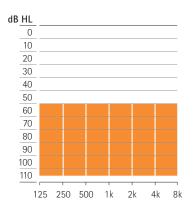
#### New, Naída S CRT

No compromise on performance should ever be made for a smaller size. The new WaterResistant Naída S CRT\* incorporates power and the latest Spice+ innovations in a surprisingly compact size. This gives young people greater confidence everyday, everywhere.

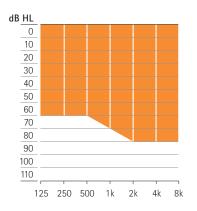
#### Audéo S SMART

Audéo S SMART, the stylish, award winning, smallest wireless Phonak hearing instrument, is another popular choice for young people. It means they can interact and socialize effortlessly everyday.

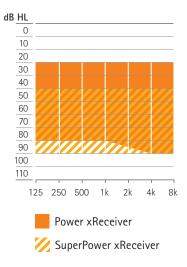
Naída S CRT SuperPower plus xReceiver



Audéo S SMART Standard xReceiver







\* Naída S CRT has an IP67 rating; this indicates it was not damaged beyond repair after 8 hours in a dust chamber, nor after being immersed in 1 meter (3 feet) for 30 minutes



## Connecting effortlessly, communicating wirelessly

Wireless technology touches on every aspect of a child's life, from home entertainment systems to education. Phonak provides a host of wireless, hands-free communication and entertainment solutions. Young people are free to be themselves, in the classroom, at the mall, listening to music or chatting on the phone.



Connectivity

## More wireless freedom with Phonak AccessLine

#### Dynamic FM - bridging the gap

When it comes to understanding speech in noise or from a distance, nothing beats Phonak Dynamic FM. It delivers unrivalled hearing performance at home, in day care or classroom situations for children of all ages, from infants right through to teenagers. The key innovation of Dynamic FM is the Adaptive FM Advantage (AFMA), an algorithm that automatically adjusts the output of the FM receiver to take into account any surrounding ambient noise. A host of user-friendly transmitters and design-integrated receivers are available, offering optimal cosmetics and water resistance\*. The universal receiver can be worn at ear level or on a neck loop, making this flexible option appealing to all.

#### ComPilot and iCom – lets children connect

Staying in touch and leading an active social life means children have to be able to connect with communication and entertainment systems. Both the new ComPilot and the iCom offer seamless StereoSound connectivity to audio sources such as computers, mobile phones, TV and MP3 players.

## Phonak TVLink S – switch on to a great TV experience

Children love TV and this dedicated Phonak TV solution offers an exceptional listening experience. True "plug and play" and one-step set-up means its ready to go in less than 60 seconds. Let them turn on, tune in and hear everything!



Nios S H2O with designintegrated FM receiver ML15i



ComPilot

\* Naída S with design-integrated FM receiver has an IP54 rating. Nios S H2O and Naída S CRT with design-integrated FM have an IP67 rating.

## Phonak Target<sup>™</sup> 2.0 Software that fits your pediatric fitting

Junior Mode was the first dedicated pediatric fitting mode. It is now available in Phonak Target<sup>™</sup> 2.0. Junior Mode empowers you to get the best out of every Phonak hearing solution for every child.

Phonak Target<sup>™</sup> Junior Mode highlights:

- Verification Mode. Designed to make verification easy and efficient.
- Enhanced Junior defaults for teenagers. A manual telephone program has been added. In addition the directional microphone is activated in SoundFlow automatic.
- Junior Quick Overview. At the touch of a button an "at-a-glance" view of the key aspects of the child's fitting is shown.
- Audiogram view. It is now possible to change the audiogram to either SPL or HL, making it ideal for counseling purposes.

- Junior Mode reminder. An information alert prompts the professional to switch to the age appropriate Junior Mode as the child grows older.
- Fully customizable. The junior defaults can be customized to suit individual fitting philosophies.
- Easy access to the Junior Reports. A broad selection of customizable, printable Junior Reports is accessible in over 20 languages. Reports are tailored to the specific needs of various readers, including the child, parent, teacher or other caregiver.



# The pediatric portfolio that has it all. For everyone.

			Features																Phonak CROS											
		Binaural Directionality									Adaptive Intelligence							A Phonak has it all												
		StereoZoom	💌 auto ZoomControl	💌 ZoomControl	DuoPhone	UltraZoom Premium	UltraZoom Advanced	UltraZoom Standard	🚺 QuickSync	FlexControl	🖌 FlexVolume	🛃 SoundHow Premium	🌉 SoundFlow Advanced	🌌 SoundHow Standard	🚺 User Preference Learning	SoundRecover	👼 Real Ear Sound	🔯 WhistleBlock	🔯 NoiseBlock Premium	🔯 NoiseBlock Advanced	🐼 NoiseBlock Standard	💿 WindBlock	👼 EchoBlock	SoundRelax	🔝 WaterResistant	👔 Acoustically Optimized Vent	Channels	Manual Programs	Compatibility	
H20	V																										16	4		
Nios S H20	III																										6	3		
	SP + UP IX																										20	5		
	SP + UP V																										16	4		
Naída S	SP + UP III																										6	3		
Nai	CRT IX																									**	20	5		
	CRT V																									**	16	4		
	CRT III																									**	6	3		
Audéo S SMART	Audéo S SMART IX																									**	20	5		
	Audéo S SMART V																									**	16	4		
	Audéo S SMART III																									**	6	3		

\*\* Available for cShell/cShell soft, xShell and SlimTip/SlimTip soft

		Technical Information															Phonak AccessLine																				
	Models	Battery	External xReceiver		ar ılator	2	2 cc			Acoustic Coupling						Categories of Hearing Impairment				Accessories							FM Receiver						Tra	FM	l itter		
				Max. Gain	Max. MPO	Max. Gain	Max. MPO	Telecoil	cShell	cShell soft	xShell	SlimTip/SlimTip soft	Upen/closed/power dome Hook	Mini hook	Power SlimTube	Mild hearing loss	Moderate hearing loss	Severe hearing loss	Profound hearing loss	ComPilot	iCom				iCube	Mvlink+	MLXS or MLXi	ML10i	ML11i	ML15i	AS10	AS11	AS15	inspiro	SmartLink+	ZoomLink+ r1:	EasyLink+
Nios S H20	Μ	13		67*	134*	63*	131*																														
	SP	13		80	141	75	140																														
Naída S	UP	675		85	144	82	142																														
	CRT	13	SuperPower plus xReceiver (xSP plus)	72	137	65	133																														
Audéo S SMART	CRT	312	Standard xReceiver (xS)	56	121	45	112																				•							•	•	•	•
	CRT	312	Power xReceiver (xP)	65	132	55	126																				•							•			•
	CRT	312	SuperPower xReceiver (xSP)	69	133	61	129																				•							•	•	•	•

\* Measured with tone hook

Requires iCom

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## **Color overview**





### Life is on

We are sensitive to the needs of everyone who depends on our knowledge, ideas and care. And by creatively challenging the limits of echnology, we develop innovations that help beople hear, understand and experience more of life's rich soundscapes.

Interact freely. Communicate with confidence. Live without limit. Life is on.

www.phonakpro.com