



# Solutions for children with unilateral hearing loss (UHL)



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**PHONAK**  
life is on





$+ 21 =$   
 $8 - 3 =$   
 $37 =$



# Ready for success

Hearing well in a multitude of situations can be particularly challenging, especially for kids and teens with unilateral hearing loss (UHL). Having solutions which allow them to fully participate and are capable of keeping up with their active lives is essential to their overall sense of well-being in and outside of the classroom.

Because children with UHL have one ear with normal thresholds and such a wide range of loss in the impaired ear, their need for hearing solutions has sometimes been dismissed. Untreated UHL may result in language delays, but may also cause a child to suffer from fatigue, feel withdrawn or leave them susceptible to a greater risk of social and emotional difficulties. Not only does this have a detrimental effect on a child but also costs the education system additional funds to provide extra services.

## Research indicates

- **1 in 1000** newborns are identified with UHL.<sup>1</sup>
- The prevalence rate increases to **3 out of 100** for school-aged children.<sup>2</sup>
- Children with UHL may be **10 times** more likely to need to repeat a year of school than children with normal hearing.<sup>3</sup>
- They are **5 times** more likely to need support services.<sup>4</sup>

At Phonak, we understand the needs faced by young listeners with UHL. For this reason, we have developed a number of dedicated solutions, proven to improve kids' access to speech even in challenging environments, for all ages and hearing losses. Designed to be easy to use and fit, while ensuring that listening remains fun, our goal is to provide all children with UHL the best possible tools in order to be ready for success.

1 Prieve, B., Dalzell, L., Berg, A., Bradley, M., Cacace, A., Campbell, D. et al. (2000). The New York State universal newborn hearing screening demonstration project: Outpatient outcome measures. *Ear & Hearing*, 21 (2), 104–117.

2 Bess, F.H., Dodd-Murphy, J. & Parker, R.A. (1998). Children with minimal sensorineural hearing loss: Prevalence, educational performance, and functional status. *Ear & Hearing*, 9, 339–354.

3 Bess, F.H. & Tharpe, A.M. (1986). Case history data on unilaterally hearing-impaired children. *Ear & Hearing*, 7, 14–19.

4 Oyler, R.F., Oyler, A.L., Matkin, N.D. (1988). Unilateral hearing loss: demographics and educational impact. *Language, Speech, and Hearing Services in Schools*, 19, 201–210.



Multiple options for  
dealing with a very  
heterogeneous population.

# Unique solutions for all

Due to the mixed and broad nature of UHL there is no ‘one size fits all’ solution. Various and/or a combination of unique solutions is required to meet a young listener’s specific needs. The particular choice of solution may even vary as kids grow and find themselves with different listening challenges.

The American Academy of Audiology (AAA) recognizes that there are multiple solutions that can be considered for children with UHL. With modern technologies such as Contralateral Routing of Signal (CROS), hearing aids like Phonak Sky™ V, and wireless remote microphone systems worn with small receivers like the Roger™ Focus, the choices are many. With any of the solutions you choose, a wireless remote microphone like Roger is recommended in noisy situations like a classroom.<sup>5</sup>

With the broadest portfolio of pediatric hearing devices, Phonak has designed solutions that easily combine to work cohesively, allowing young clients to focus on what is important – **listening, interacting and learning.**

5 American Academy of Audiology. (2013) American Academy of Audiology Clinical Practice Guidelines on Pediatric Amplification.

# Phonak Sky V

## Explore the world with confidence

Based on the proven performance of our signature Venture platform, Phonak Sky V introduces ground-breaking features and technologies such as AutoSense Sky OS and SoundRecover2. Sky V is also easy and fun to wear.

### AutoSense Sky OS

AutoSense Sky OS is the first of its kind, an automatic operating system specifically developed for kids and teens. By accurately capturing and analyzing a child's environment in real-time, AutoSense Sky OS always selects the right blend of programs and settings to optimize a child's listening and understanding, in and outside of the classroom.

### Benefits of AutoSense Sky OS

- **Up to 30%** more precise for noisier classrooms
- **Up to 39%** more accurate in recognizing yelling and shouting as unwanted noise compared to the adult system<sup>6</sup>

### SoundRecover2

SoundRecover2 improves high-frequency speech audibility by utilizing its adaptive frequency-lowering algorithm that is only applied when the level of hearing loss requires it. Sound quality of mid and low frequencies is maintained while high-frequency sounds are made audible. By creating an optimal listening experience, SoundRecover2 enables more children than ever before to hear and communicate with confidence.<sup>7</sup>

### RogerReady

Adding a Roger receiver is easier than ever before. No additional programming of the hearing aids is required. Sky V devices with direct audio input automatically detect the signal from a Roger microphone and activate the Roger + Mic program.



<sup>6</sup> Automatic and directional for kids. Phonak Insights (2016)

<sup>7</sup> SoundRecover2 for Pediatrics: Improving audibility where it matters most. Phonak Field Study News (2016)

# Phonak CROS II

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## The smart solution

For young listeners who have a severe to profound hearing loss or unaidable hearing loss – also commonly referred to as single-sided deafness (SSD) – Phonak offers a CROS solution. Phonak CROS II allows speech to be heard from the poorer-hearing ear by wireless transmitting sound to a Sky V hearing aid on the ear with normal hearing.

### CROS II performance

- Utilizes **Phonak Binaural VoiceStream Technology™** providing access to binaural beamforming
- **Up to 30%** longer battery life than the previous Phonak CROS

Kids using CROS II and Sky V can now follow conversations even with some added surrounding noise. This is thanks to StereoZoom, the binaural beamforming feature that helps a child focus on a person talking in front of them. As a result, the CROS II transmitter streams less noise to the hearing aid on the normal ear.<sup>8</sup>

### CROS II, Sky V and Roger

Young listeners can wear their CROS II and Sky V solution at all times to get the full benefit of sound from both sides.

Then, by wearing a Roger receiver attached to their Sky V, young listeners also have automatic access to the Roger signal when the Roger microphone is turned on. The RogerReady feature in Sky V means kids and teens don't have to remember to push a button or change a program – no worries, just listening. The Sky V automatically changes to the Roger program, and when Roger is no longer being used, the CROS signal is automatically switched back on.

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## CROS II

The CROS II BTE style\* is available in 2 models, CROS II-312 and CROS II-13. Decision on which to choose depends on personal preference for coupling, retention options or security. Both can be used with any of the Sky V hearing aids.

CROS II-312 has a size 312 battery and can be used with a CROS Tip or a SlimTube for a discrete design.

CROS II-13 uses a size 13 battery and can also be configured with the CROS II Hook and an ear mold for best retention.

A tamperproof battery door can also be ordered for the CROS II-13. Both the CROS Hook and tamperproof battery door meet the international standards for mechanical strength.



CROS II-13  
with CROS Hook



CROS II-13  
with SlimTube



CROS II-312  
with SlimTube



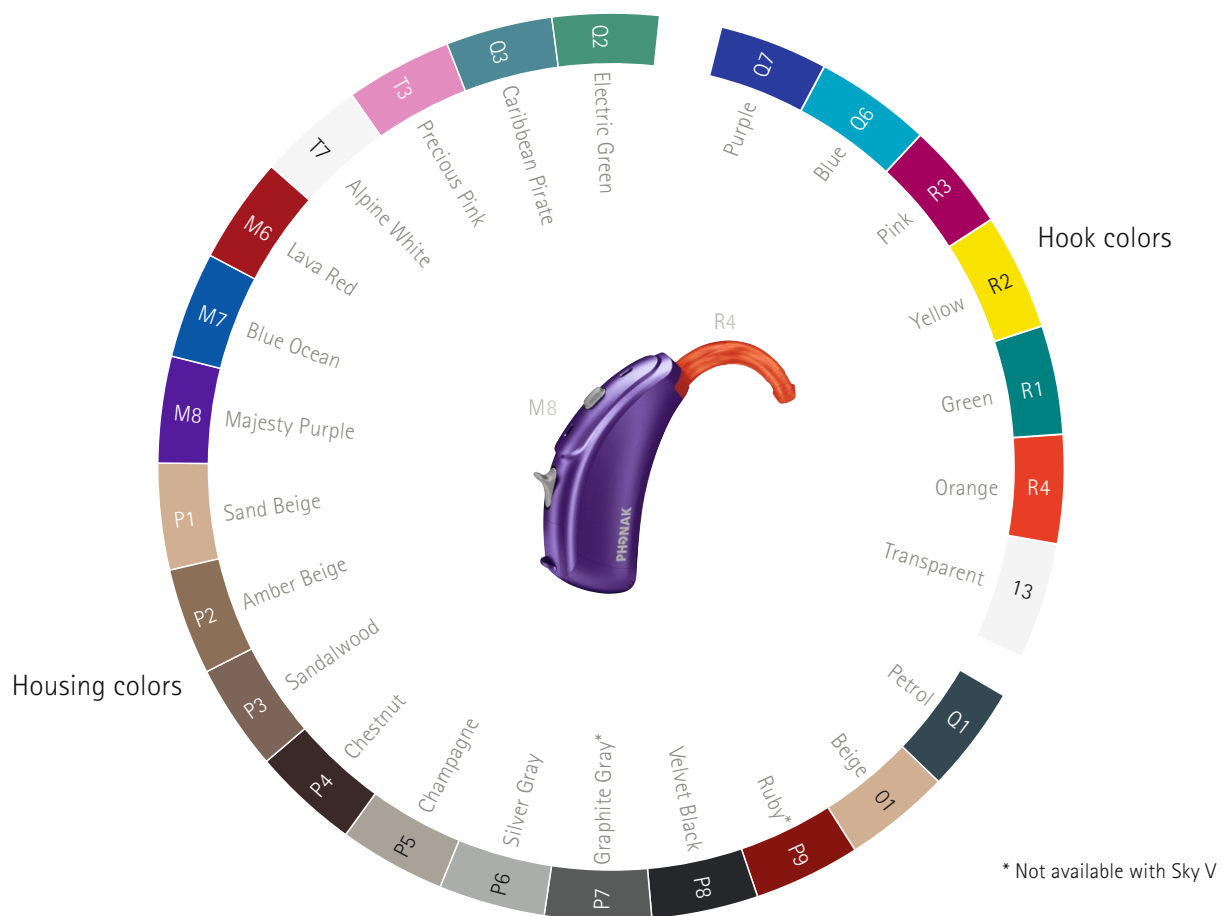
CROS II-312  
with CROS Tip

\* CROS II also comes in two custom styles that are compatible with Virto V custom hearing aids.



# The color of sound

CROS II-13 will now come in our Sky V Mix & Match colors, for more choices for personalization.



## CROS II-312 housing colors

|            |             |             |               |              |        |
|------------|-------------|-------------|---------------|--------------|--------|
| P1         | P2          | P3          | P4            | P9           | Q1     |
| Sand Beige | Amber Beige | Sandalwood  | Chestnut      | Ruby         | Petrol |
| O1         | P5          | P6          | P7            | P4           |        |
| Beige      | Champagne   | Silver Gray | Graphite Gray | Velvet Black |        |



CROS II-312

# A world full of sound

**Kids and teens are engulfed in a world full of sounds which are often different to that of adults.**

Classrooms, playgrounds and social activities are filled with noises coming from different directions which can make it hard for young listeners with UHL to hear all that they should. Learning to navigate through these everyday listening challenges is important for their speech and language development, educational achievement, and overall well-being.

Phonak Roger wireless technology caters to hearing challenges related to UHL, in and outside of the classroom. Regarded as the most recommended classroom solution, Roger microphone technology features advanced adaptive signal processing and streams speech directly to a small receiver worn on the ear or attached to a hearing aid.

Designed to be hassle free, Roger can be used in combination with all available solutions for UHL.

## **Aidable hearing loss**

Roger receiver attaches directly to the Sky V

## **Unaidable hearing loss**

- CROS II on the impaired ear, and the Roger receiver attached to the Sky V hearing instrument on the normal-hearing ear
- or
- Roger Focus receiver worn on the normal-hearing ear

Any Roger solution chosen will enhance a child's experience listening in complex environments.





# Roger Focus



## Every child deserves the chance to focus

Children with UHL and no usable hearing on their impaired ear face the greatest difficulty in noisy situations and at a distance. Increasing the **signal-to-noise ratio** creates a significant advantage for academic situations and can be beneficial in listening environments outside of school.

Worn comfortably on the normal hearing ear, **Roger Focus** is a wireless receiver designed to bring the speaker's words directly into a child's ear from the Roger microphone. This enables young listeners to hear and understand more, while being more fully engaged in their daily activities. Roger Focus (Figure 1) provides a **53% average improvement** over not wearing a device and for some children it could mean hearing almost everything - in comparison to hearing nothing in noise.<sup>9</sup>

### Roger Focus benefits:

- Highly discreet
- Extremely light
- Usable out of the box (no programming)
- One-click microphone connection
- Volume control
- Water and dust resistant
- 17 color options
- Customizable with 4 SlimTubes and 3 sizes of open domes

### Roger Focus performance

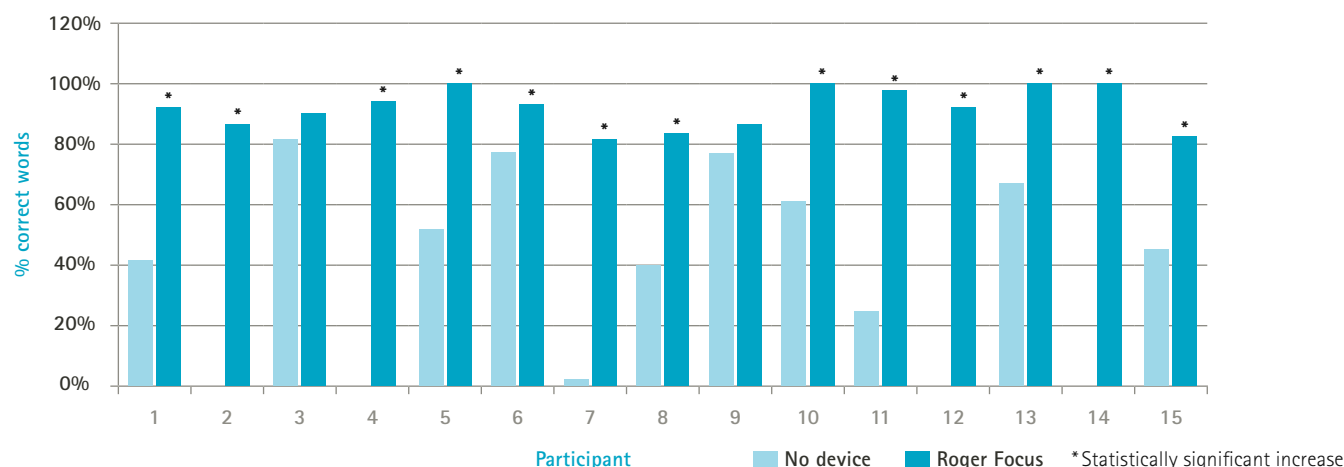


Figure 1. Speech-in-noise results for 15 children using Roger Focus vs no device.

## Roger Focus housing colors

|                |                  |               |             |                            |                             |
|----------------|------------------|---------------|-------------|----------------------------|-----------------------------|
| Q2             | Q3               | Q4            | Q5          | Q6                         | Q7                          |
| Electric Green | Caribbean Pirate | Dragon Orange | Vanity Pink | Blue Lagoon<br>Transparent | Royal Purple<br>Transparent |
| P1             | P2               | P3            | P4          | P6                         | P8                          |
| Sand Beige     | Amber Beige      | Sandalwood    | Chestnut    | Silver Gray                | Velvet Black                |
| P9             | Q1               | T3            | O1          | 13                         |                             |
| Ruby           | Petrol           | Precious Pink | Beige       | Pure Transparent           |                             |





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## Roger microphones

With the Roger portfolio, we ensure that kids and teens with unilateral hearing loss have the confidence to hear well in their constantly changing, interactive and often noisy world.



Roger Touchscreen Mic



Roger Pass-around



Roger Multimedia Hub



Roger Pen



Roger Clip-On Mic

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## Roger receivers

With several styles of Roger receivers available, there is a solution for every child with unilateral hearing loss, regardless of the hearing technology they are currently using.



Roger Focus



Roger design-integrated receivers



Roger X



Roger MyLink

This brochure highlights our passion for creating life-changing, innovative solutions that support a holistic approach towards meeting the specific and unique needs of all kids and teens with unilateral hearing loss.

# Life is on

At Phonak, we believe that hearing well is essential to living life to the fullest. For more than 70 years, we remain true to our mission by developing pioneering hearing solutions that change people's lives to thrive socially and emotionally. Life is on.

[www.phonakpro.com/UHL](http://www.phonakpro.com/UHL)

