Phonak pediatric solutions

When hearing technology unlocks a child's full potential, life is on

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Together,
we change lives

Ears are the doorway to the brain

"We are accustomed to talking about hearing with our ears, but science confirms that we actually hear with the brain. The ear is the structure that captures raw sound from the environment and directs it to the brain; it is the brain that processes and gives meaning to that auditory information. As such, our ears can be thought of as 'doorways' to the auditory brain centers where hearing truly occurs.

Hearing loss can be described as a 'doorway problem' – an obstruction that prevents auditory information from reaching the brain, thereby impacting the ability to learn to listen, talk and read. Fortunately, we have a way to open the door: hearing technologies that activate, stimulate and develop auditory neural pathways. Hearing technologies can therefore be thought of as 'brain access devices.'

For families choosing a listening and spoken language (LSL) outcome for their children who are deaf or hard of hearing, the appropriate hearing technology must be fit and managed as soon as possible after birth by an audiologist. These 'brain access devices' must be worn for at least 10 hours per day, and families are encouraged to speak their home language with their children from infancy.[1] Children need to be immersed in a conversation-rich (talking, reading aloud, music) environment in order to develop their brain with knowledge for spoken language and literacy."

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The key to unlocking a child's full potential

Young listeners need access to millions of words and thousands of hours of listening to develop spoken language and literacy.[2–4] As the world leader in hearing solutions, Phonak provides hearing care professionals, parents and caregivers with innovative, life-changing solutions developed especially for children of all ages. Our comprehensive pediatric portfolio embodies our 45 years of expertise and showcases our holistic approach to opening the doorway to the brain.

Evidence-based solutions for better outcomes

Research shows that providing children with optimal hearing solutions from an early age directly impacts just how well they will succeed.[1]

The Outcomes of Children with Hearing Loss (OCHL) is a prospective, longitudinal project examining the impact of early identification and intervention on outcomes for children with hearing loss. Numerous researchers from the University of Iowa, Boys Town National Research Hospital, and the University of North Carolina-Chapel Hill followed over 300 children with permanent, mild to severe bilateral hearing loss for up to three years or more. Their findings showed that even a mild hearing loss puts a child at risk of language delays.

There are three influential factors that guard against language delays and are predictors of better outcomes of children with hearing loss.

Stronger development

Provision of **well-fit hearing aids** reduces risk and provides protection against language delays. Greater aided audibility is associated with stronger language outcomes in preschool.

Faster learning

Children who **wear hearing aids at least 10 hours per day** learn language **faster** than children with less hearing aid use and are more likely to have age-appropriate skills by the time they enter elementary school.

Better outcomes

High-quality language exposure is associated with better language outcomes. Children with hearing loss should be exposed to a language-rich environment to drive their language and intellectual development.

The study has confirmed, and continues to investigate, the factors that lead to better outcomes and how best clinical practice can support auditory development. At Phonak, this essential information is used to guide us in the development of pediatric hearing solutions that foster successful speech and language outcomes for children with hearing loss.

Opening the doorway to the brain

Based on the successful Phonak Belong™ platform, Phonak Sky™ B incorporates our knowledge of how a child's brain develops and the challenging listening environments that children encounter. Sky B opens the doorway to the brain with innovative technology encased in robust housing. It is specifically designed to be easy to use and to keep up with even the most active young children.

The Sky B portfolio comprises four performance levels (B90, B70, B50, B30*), six models (including a rechargeable BTE) and offers the following benefits:

Better understanding

- AutoSense Sky OS is the only** operating system built for a child's listening environment[5,6]
- SoundRecover2 gives children access to a broader range of sounds essential for speech and language development***[7,8]
- Roger™ together with hearing aids gives children better access to hearing their peers and teachers in a classroom[9]

Easy to use

- Indicator light reassures parents and caregivers of the status of the device
- Built-in rechargeable lithium-ion battery for Sky B-PR means no battery changes are required

Safe and strong

- Water resistant and dust-tight with an IP68**** rating
- Tamperproof options provide safety for our youngest users*****
- Robust housing designed to meet the active lifestyles of children

* Only available in specific countries
** Valid February 2018
*** Compared to SoundRecover
**** IP68 indicates that the hearing aid is water resistant and dust tight. It survived continuous immersion in 1 meter of water for 60 minutes and 8 hours in a dust chamber as per the IEC60529 standard, no traces of dust were evident within the housing
***** Phonak complies to the IEC standard of tamperproofing for children aged up to 36 months


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Accessing the brain with better hearing performance

No manual adjustment

Children need to spend their time listening, playing, and learning, not adjusting their hearing aid programs. AutoSense Sky OS is the only* operating system built for a child's listening environment. It is clinically proven to always select the best settings and maximize hearing performance.**[5,6]

Crystal clear sound

Because it is so important for brain development and speech understanding to hear all aspects of speech, providing high-frequency amplification that is audible but does not distort other sounds is key. 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.[8] Sound quality of low and mid-frequencies is maintained while high-frequency sounds are made audible.[7]

Capturing full conversations

With Phonak Roger and directional setting, children using Sky B get the best of both worlds: superior speech understanding with the Roger system and automatically activated directional microphones on Sky B.[9]

Optimal listening

RogerReady makes adding a Roger receiver to a hearing aid simple. Without the need for additional programming, Sky B devices with direct audio input and Roger ear-level receivers automatically detect the signal from a Roger microphone and activate the 'Roger + Mic' program. This seamlessly allows hearing aids to continuously adapt between AutoSense Sky OS and the Roger program without the need to manually change programs.

Surround sound

The innovative Binaural VoiceStream Technology (BVST) feature in Sky B hearing aids allow each side to work together. It streams the full audio bandwidth bi-directionally in real time, tackling challenging listening situations by simulating what the brain does with sounds from both ears. This linking of two hearing aids ensures that children benefit from hearing speech in both ears, especially in noisy environments, on the phone, or when they can't see the speaker.***[10,11] This technology also sets the foundation for the Phonak CROS B solution.

* Valid February 2018

** Based on the same technology as AutoSense OS

*** Compared to without Binaural VoiceStream Technology


Hearing performance
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Greater hearing performance where kids need it the most

Understand better in noise

The pediatric automatic program and feature selector in AutoSense Sky OS* is:

- up to **30% more precise** for noisier classrooms[6]
- up to **39% more accurate** in recognizing yelling and shouting as unwanted noise[6]

Hear more everywhere

SoundRecover2 provides **improved audibility of high-frequency information** while also maintaining the low and mid-frequency sounds.[7]

Hear better on the phone

By streaming the signal in real time to both ears, a caller's voice can be heard binaurally and results in an **improvement of 30%** in comparison to listening with one ear in both quiet and noisy environments with DuoPhone.[11]

Understand more in the classroom

The Roger and directional setting **improves access** to conversations with peers by **26% over** Roger and omnidirectional.[9]

* Compared to AutoSense OS
** Compared to SoundRecover

Water Resistant

Water resistant hearing aids

Phonak Sky B hearing aids are water resistant (IP68 rating*). This means kids can be kids, even when life gets a little wet.**

More language-rich activities

Our research[12] shows that:

- children wear their hearing aids only **10–20%** of the time while engaged in water-based activities
- water-based activities are the **third most important type of leisure activity** for families
- water resistant hearing aids allow more activities where kids can **stay fully aware** of the world around them

New confidence for parents

A recent trial[13] suggests that participating in light water-based activities (where hearing aids are not totally submerged) 2 to 3 times a week **did not result in any damage to Phonak Sky hearing aids.**

Parents of kids who were part of this trial reported **new confidence** in letting their kids participate in water-based activities. The kids involved showed **greater responsiveness and participation,** thanks to full understanding while engaged in activities.

* IP68 indicates that the hearing aid is water resistant and dust tight. It survived continuously in 1 meter of water for 60 minutes and 8 hours in a dust chamber as per the IEC60529 standard, no traces of dust were evident within the housing

** It is not recommended to use these hearing aids while swimming or where chlorinated water, soap, salt water or other liquids with a chemical content are present

Keeping kids in charge all day long

Nothing should slow kids down – least of all, worrying about their hearing aids losing power. Sky B-PR is the only* rechargeable hearing aid built specifically for kids. It combines innovation and high performance with groundbreaking battery technology.

With 40% more power than conventional rechargeable batteries, lithium-ion is reliable and capable of supporting the innovative technology and performance of Sky B-PR. Designed to simplify life, Sky B-PR eliminates the hassles that come with using disposable batteries. Instead, parents, caregivers, teachers, and children can enjoy peace of mind knowing their hearing aids will stay powered all day long – thanks to the following features:

1. 24 hours** of hearing with a charging time of only 3 hours[14]
2. All of the tested and proven features of Phonak Sky B including tamperproof earhooks
3. Full day*** of battery life with one simple charge, even with Roger streaming during a school day[15]
4. Built-in rechargeable battery that cannot be removed or swallowed
5. Indicator light confirming that the hearing aids are powered on, the Roger program is active and warns of a low battery
6. Less environmental impact vs. disposable batteries

* Valid Febuary 2018

** Expected results when fully charged, and up to 80 minutes wireless streaming time

*** 16 hours of hearing with 10 hours of Roger use or audio streaming

Please note : Sky B-PR is not CROS B compatible.

To complement the innovative rechargeable Sky B-PR, Phonak offers easy-to-use smart charging options so parents and children can charge the hearing aids wherever they go without having to worry about running out of power.

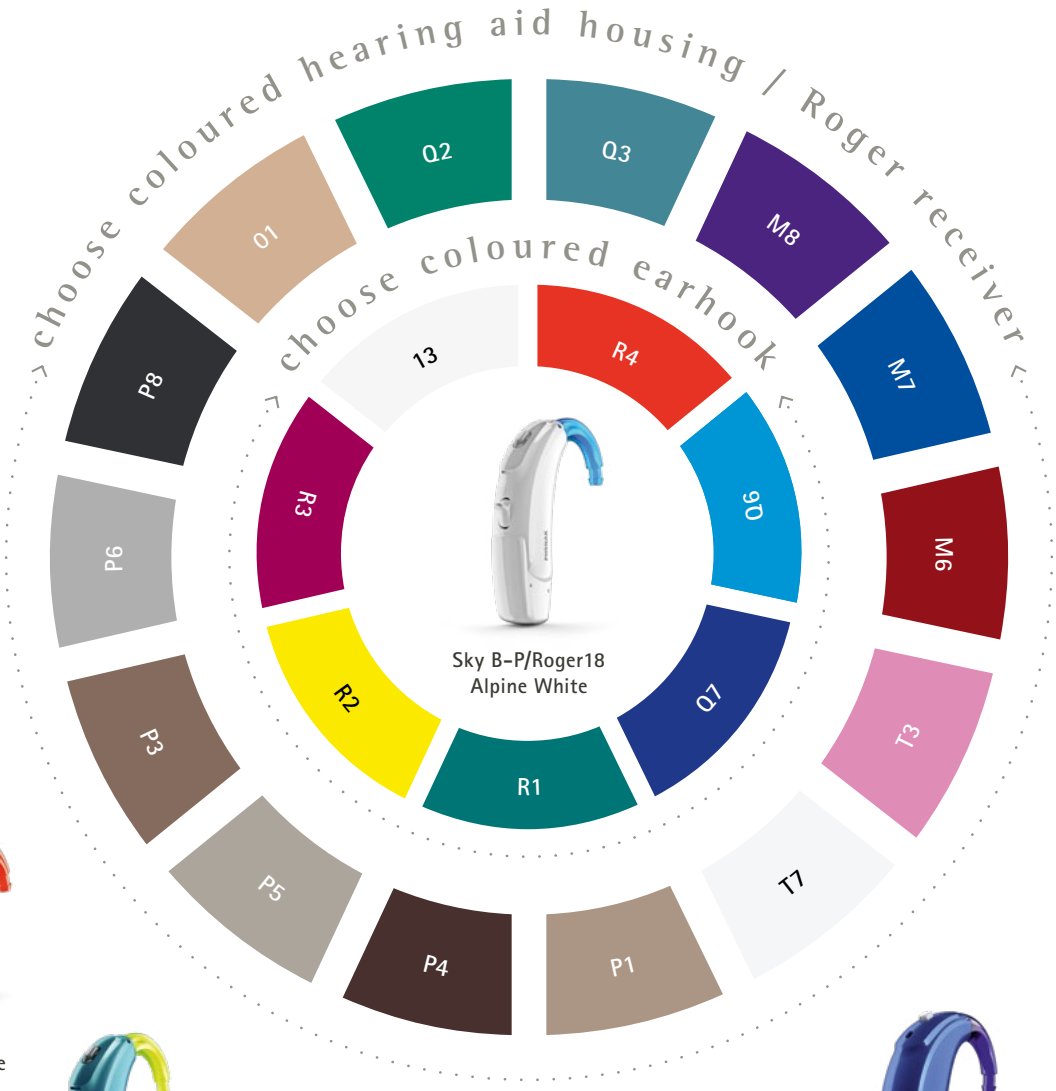
Phonak Charger Case – comes with charger, drying case, protective hard case, and cleaning tool.

Phonak Mini Charger – most compact charging option.

Phonak Power Pack – easily attaches to the Phonak Charger Case, ideal for short trips when no power source is available.

Playful design

With an exclusive Mix & Match concept incorporating seven coloured earhooks and 14 different colour options for hearing aid housings and Roger receivers, every child can design a hearing aid that truly suits their personality and identity.



Sky B-P/Roger18
Alpine White

Sky B-M
Majesty Purple

Sky B-P
Caribbean Pirate

Sky B-PR
Electric Green

Sky B-SP
Precious Pink

Sky B-UP
Blue Ocean

Sky B-RIC
Lava Red

Phonak Sky™ – Award winner of Golden Concha 2017 in the category of 'Best pediatric hearing aid'.

Let teens take charge of their hearing

Powered by Phonak Belong technology, Audéo B-Direct is an ideal solution for teens. Enhanced with the proprietary SWORD™ 2.4 GHz radio chip, Audéo B-Direct offers the following benefits:

- Direct connectivity to any cell phone*, for better hearing and socializing with peers
- Easy and discreet volume or program changes to hearing aids
- Phone and video calls with Skype, WhatsApp, FaceTime® via wireless Bluetooth® connectivity to hearing aids**
- Automatic connectivity to TV through the new and compact solution called TV Connector
- Hearing aid can be used as a wireless headset for hands-free calls

What's more, the Phonak Remote app gives teens control over their hearing aids without an intermediary streaming device.

Audéo B Direct ***

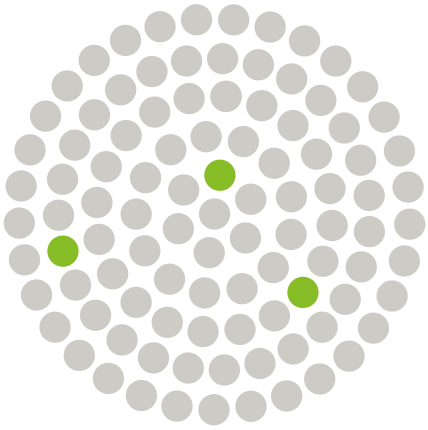
* With Bluetooth® 4.2 wireless technology and most older Bluetooth phones

** The WhatsApp name is a trademark of WhatsApp, Inc., Skype is a trademark of Microsoft, Inc.; FaceTime® is a trademark of Apple, Inc and Bluetooth is a trademark of Bluetooth SIG Inc.

*** Audéo B Direct is not Roger or CROS B compatible

Unilateral Hearing Loss (UHL) – ready for success

Three in 100 school-aged children have unilateral hearing loss (UHL)[16] and are at an increased risk of needing extra resources and repeating a year of school.[17,18] Phonak recognizes the needs of these young listeners and for this reason we have developed a number of dedicated solutions proven to improve kids' access to speech even in challenging listening environments. Designed to be easy to fit and use, while ensuring that listening remains fun, our goal is to provide children with UHL the best possible tools in order to be ready for success.

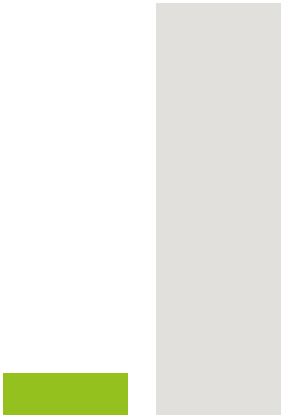


3 in 100

Three in 100 school-aged children are thought to have some degree of UHL.

5 times

They are 5 times more likely to need support services.



10 times

They are 10 times more likely to need to repeat a year of school than children with normal hearing.

For further information, please visit www.phonakpro.ca/UHL

Comprehensive solutions

There is no ‘one size fits all’ solution for children with unilateral hearing loss. A combination of unique solutions – which may vary as kids grow and find themselves with different listening challenges – is required to meet a young listener’s specific needs.[19]

Phonak Sky B for aidable UHL

Made for kids and easy to use.

Phonak CROS B

Child friendly and high performing sound is transmitted from the impaired side to the normal hearing ear when used with Sky B.

Roger Focus

A discreet and comfortable open receiver worn on the normal-hearing ear allows the child to clearly hear speech from someone using a Roger microphone.

Roger portfolio – keeping kids connected

The Roger digital wireless portfolio has been created to work seamlessly with other hearing solutions to improve outcomes for children with hearing loss at home, at school, or out with friends. This solution provides increased access to quality sound and language even in the most challenging situations.

The benefit of Roger for school-age kids and teens is well known. A recent study conducted with preschool children at Vanderbilt University showed the use of a Roger microphone at home increased their word exposure by approximately 5,300 words in an eight-hour day. Based on an average hearing aid use time, this is a 42% increase in parent or caregiver speech made available to a child, compared to using hearing aids alone.[21] And when a young child needs at least 45 million words spoken to them to be ready for school, providing a family with a Roger system can really make a difference.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Microphone portfolio
Roger Touchscreen
Roger Select
Roger Pass-around
Roger Pen
Roger Multimedia Hub
Roger Clip-On Mic
School life
Family life
Social life
Roger X
Roger design-integrated receivers
Roger MyLink
Roger Focus
Receiver portfolio

Roger microphone portfolio

Roger Touchscreen Mic features a user-friendly interface for use in the classroom. With an automatic microphone function, it conveniently switches from an individual talker to a small group interaction mode, depending on its placement.

Roger Pass-around is designed to enhance classroom discussions so that not only teachers, but all students are heard clearly. With an appealing design, the microphone is the optimal size for kids and teens to hold and fully control.

Roger Pen offers state-of-the-art wireless technology with superior speech-in-noise and over-distance performance. Packed in a discreet design, its features include fully automated or manual microphone settings and Bluetooth® connectivity, providing an all-inclusive listening experience.

Roger Select uses MultiBeam Technology and gives teens discreet control in large, noisy conversations. When placed on a table, it can automatically select who is talking, or the user can manually select, with a tap of the microphone, who they want to listen to when multiple conversations are happening at the same time.

The Roger Clip-On Mic is a small and lightweight microphone worn on a shirt. Perfect for parents and family members, multiple Roger Clip-On Mics can be used together, allowing a child to hear everyone.

Roger Multimedia Hub allows a teacher's voice to be heard simultaneously with an audio signal. Used as a stand-alone device, it can be connected to an audiobook or tablet for individual listening.

Roger receiver portfolio

Roger X is the miniature universal Roger receiver with 3-pin Euro plug that is compatible with virtually all BTE hearing aids, cochlear implant speech processors, and streaming devices.

Roger design-integrated receivers perfectly complement the sleek contours of a Phonak hearing aid and are available in matching colors and tamperproof versions. There are also Roger design-integrated receivers compatible with selected cochlear implants (CIs) from Advanced Bionics, Cochlear, and MED-EL.

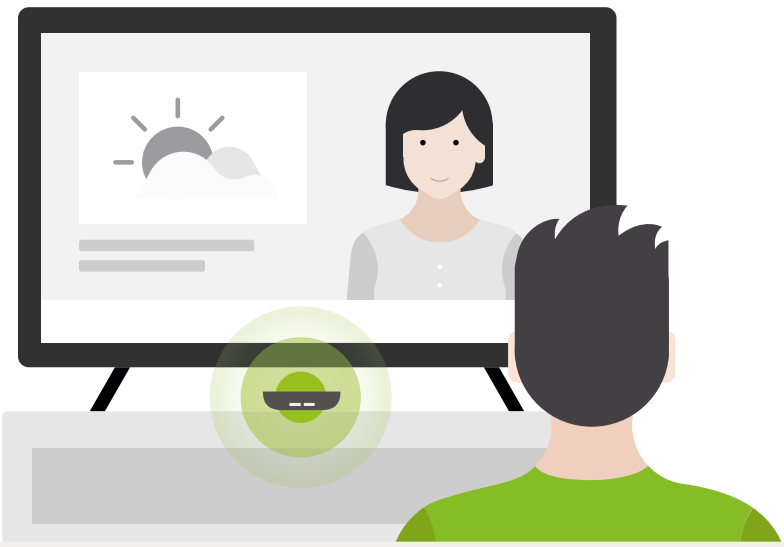
Roger MyLink is an easy-to-use universal Roger receiver worn around the neck and compatible with any hearing aid or cochlear implant with T-coil.

Roger Focus is a discreet BTE receiver that cuts through distracting background noise to bring a speaker's words directly into a child's ears. These devices enable children with unilateral hearing loss, children with Auditory Processing Disorder (APD), and children with Autism Spectrum Disorder (ASD) to hear better in noise.

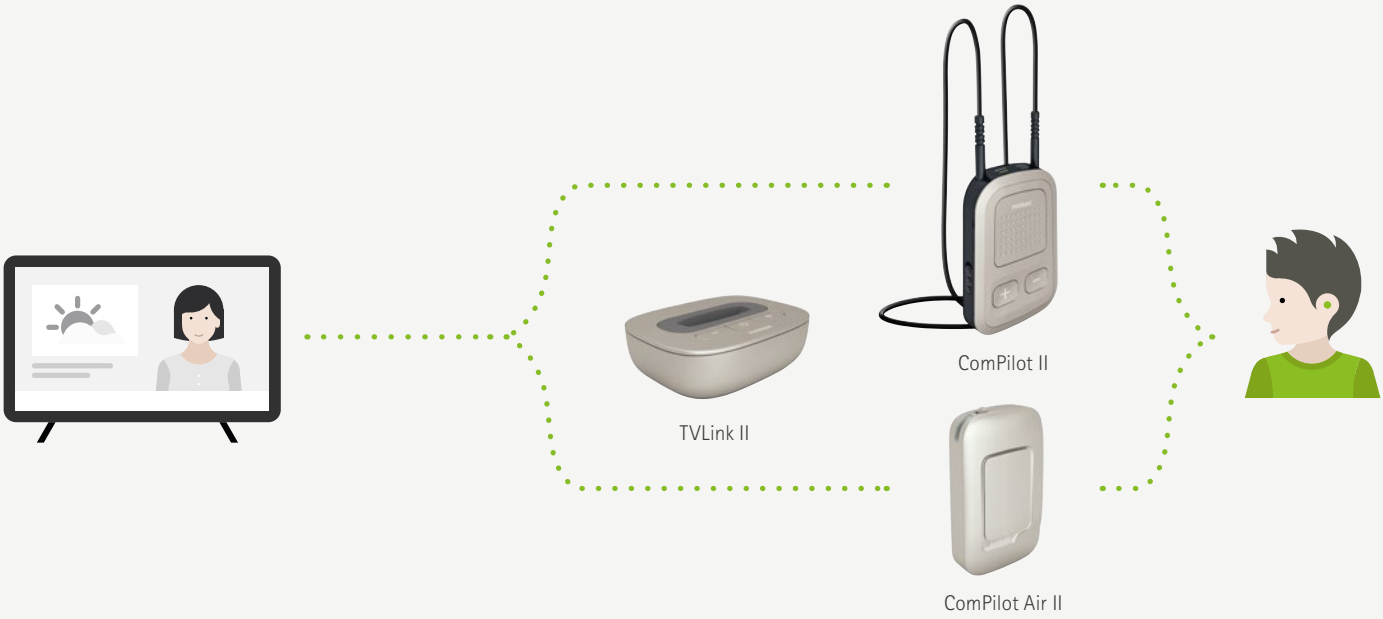
Phonak wireless portfolio – communication is key

The Phonak wireless portfolio compatible with Sky B allows kids to connect and communicate in any situation.

With an array of easy-to-use products, young kids and teens can make and receive phone calls at home or on the go, watch TV, listen to music, and stream their favorite shows and movies on a laptop or tablet.

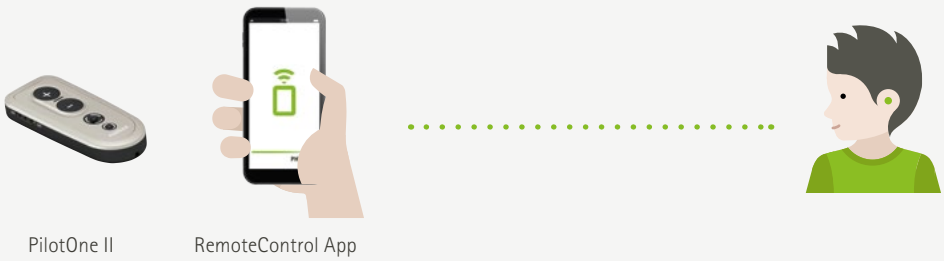


TV and music



Phone

Personal control



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Life is on

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

www.phonakpro.ca

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HEAR THE WORLD