

1. This document is created for accessibility and is intended to be a supplemental resource. If you would like to print a hard copy of this document, please follow the general instructions below to print multiple slides on a single page or in black and white.
2. This handout is for reference only. Non-essential images have been removed for your convenience. Any links included in the handout are current at the time of the live webinar, but are subject to change and may not be current at a later date.
3. Copyright: Images used in this course are used in compliance with copyright laws and where required, permission has been secured to use the images in this course. All use of these images outside of this course may be in violation of copyright laws and is strictly prohibited.
4. Social Workers: For additional information regarding standards and indicators for cultural competence, please review the NASW resource: Standards and Indicators for [Cultural Competence in Social Work Practice](#)
5. Need Help? Select the “Help” option in the member dashboard to access FAQs or contact us.

How to print Handouts

On a Mac

- Open PDF in Preview
- Click File
- Click Print
- Click dropdown menu on the right “preview”
- Click layout
- Choose # of pages per sheet from dropdown menu
- Checkmark Black & White if wanted.

On a PC

- Open PDF
- Click Print
- Choose # of pages per sheet from dropdown menu
- Choose Black and White from “Color” dropdown

No part of the materials available through the continued.com site may be copied, photocopied, reproduced, translated or reduced to any electronic medium or machine-readable form, in whole or in part, without prior written consent of continued.com, LLC. Any other reproduction in any form without such written permission is prohibited. All materials contained on this site are protected by United States copyright law and may not be reproduced, distributed, transmitted, displayed, published or broadcast without the prior written permission of continued.com, LLC. Users must not access or use for any commercial purposes any part of the site or any services or materials available through the site.



Meet unique needs with Phonak

Peytra Gettings, AuD

Webinar FAQs

- **How to ask a question:**
 - Click Q&A, type your question and Send.
- **Where to get the handout:**
 - Resources in the classroom and under Pending Courses in your account
- **How to view captions:**
 - Click Live Transcript CC button
 - Click Show Subtitle
- **How to earn CEUs:**
 - After the webinar, go to your Pending Courses and pass the multiple-choice exam.
- **For assistance or tech support:**
 - Call 800-753-2160
 - customerservice@audiologyonline.com
 - Use the Q&A window



Meet unique needs with Phonak.

Peytra Gettings, AuD
Senior Clinical Trainer, Phonak



Speaker

Financial disclosure: Speaker is employed by Phonak US

Non-financial discloser: None

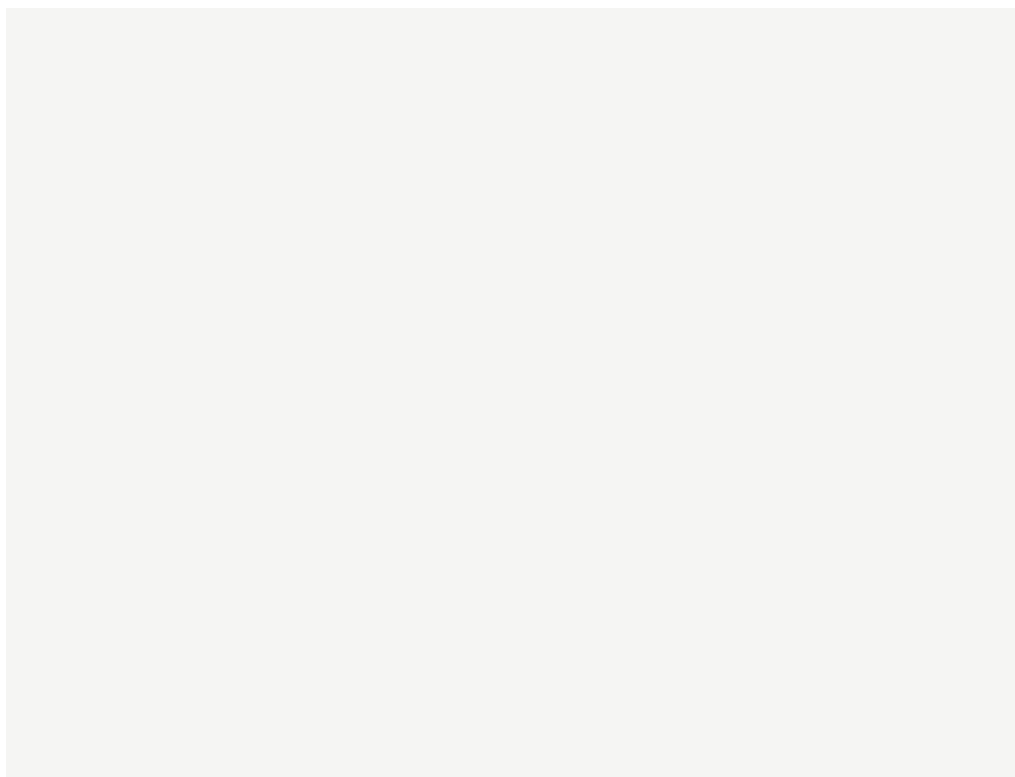
Risks/Benefits

- The applicability and accuracy of the course content may vary by the clinical, geographical, and cultural context; you should evaluate the course accordingly.
- As healthcare is rapidly evolving, new findings may change the validity of the information presented in this course. Providers should always consult the latest research and guidelines from professional associations.
- The interventions discussed in this course may be limited in generalizability, requiring practitioners to consider specific individual and population factors.
- The course may not cover all possible risk factors, diagnostic methods, or treatment options, and complex cases may require additional considerations.
- Healthcare providers should apply cultural competence and sensitivity to ensure effective and respectful care based on their patients' diverse needs.
- Providers should always evaluate the limitations of diagnostic and screening tools, considering their potential for false results as well as any ethical implications.
- It is the responsibility of course participants to critically evaluate the evidence from multiple sources to guide professional practice.



One size does NOT fit all

- Personalized fit
- Better function & outcomes
- Confidence





Unilateral Hearing Loss (UHL)



Severe to profound Hearing Loss

Unique challenges

Products

Programming

Beyond the HA

Learning Outcomes

After this course, participants will be able to:

- Describe the steps for a CROS/BiCROS fitting
- Describe software tools to support those with severe to profound hearing loss
- Explain how Roger can assist special populations



PHONAK
life is on

Unilateral Hearing Loss



Prevalence and causes of UHL

1 in 1000
identified at birth³

3 in 100
for school age children⁴

7.2%
of American adults⁵

- Congenital cytomegalovirus
- Cochlear malformations
- Bacterial meningitis
- Enlarged vestibular aqueduct
- Chiari malformation
- Premature birth
- Genetic causes
- Postnatal infections
- Sudden idiopathic hearing loss
- Head trauma
- Meniere's Disease
- Acoustic Neuroma
- Unknown causes

Unaidable unilateral hearing loss: Small population, big challenges



Difficulty hearing in noise

Less socializing
Increased listening effort and fatigue



Difficulty segregating
sounds

Difficulty localizing sounds
Increased listening effort and fatigue



Difficulty understanding
speech

Selective attention
Reduced work productivity
Increased listening effort and fatigue

Real life challenges



‘ Not only was I **struggling to deal with the practical challenges** of living with a reduced sense of hearing, but I was also **overwhelmed by the emotional aspects** of hearing loss such as feelings of isolation and the need to grieve the sound I had lost...¹⁴

How CROS systems help overcome hearing and well-being challenges

Improved
speech
intelligibility
in diffuse
noise¹

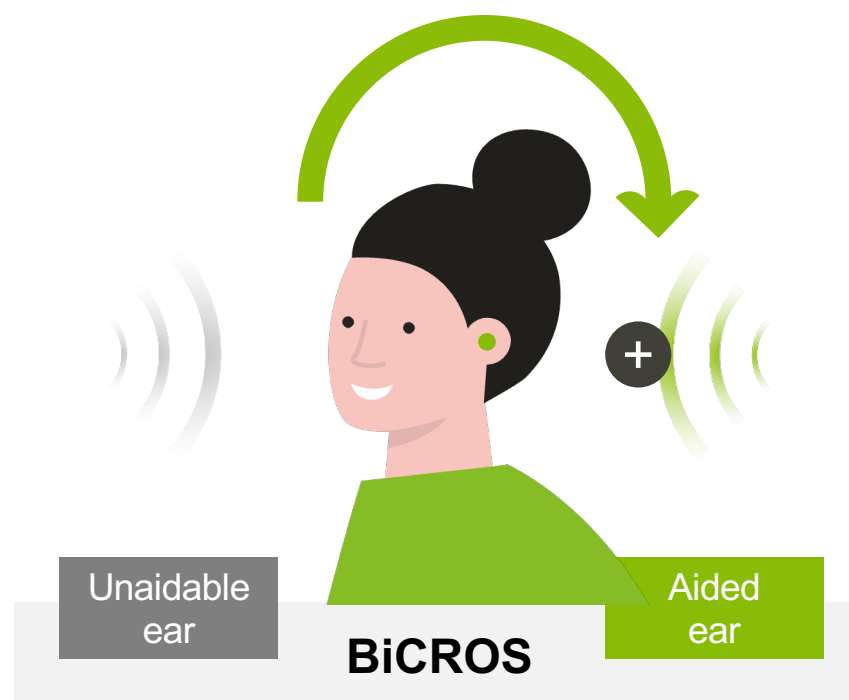
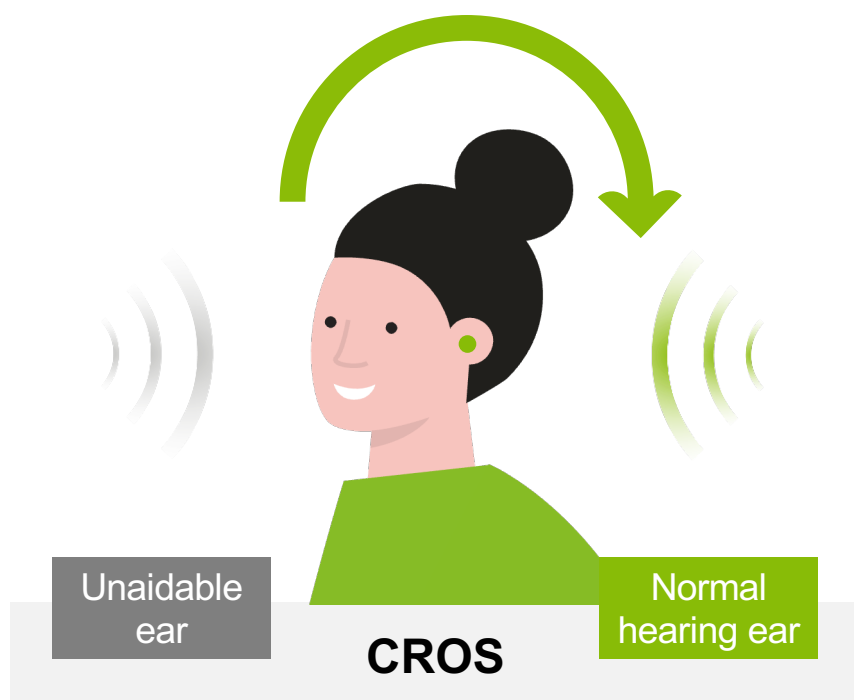
Improved speech
intelligibility in
noise when
speech is
presented to the
unaidable ear¹

Improved
subjective
quality of
hearing¹



1. Picou, E. M., Davis, H., Lewis, D., & Tharpe, A. M. (2020). Contralateral Routing of Signal Systems Can Improve Speech Recognition and Comprehension in Dynamic Classrooms. J Speech Lang Hear Res, 63(7), 2468-2482. https://doi.org/10.1044/2020_JSLHR-19-00411

How can CROS systems help?



A look back at Phonak CROS systems



2011
CROS



2015
CROS II



2016
CROS B



2018
CROS B-R



2021
CROS P



2023
CROS L



2024
CROS I

CROS I-R compatibility



CROS I-R



Audeo I-R

*Not compatible with Audéo I-Sphere



Charger RIC
Infinio



ChargerGo RIC
Infinio

Coupling options

Solution 1



CROS Tube 6.0



Domes

Solution 2



CROS Tube 6.0



SlimTip

Solution 3



CROS Tip

Additional CROS option—Lumity

CROS L



Audéo L-RT



CROS L



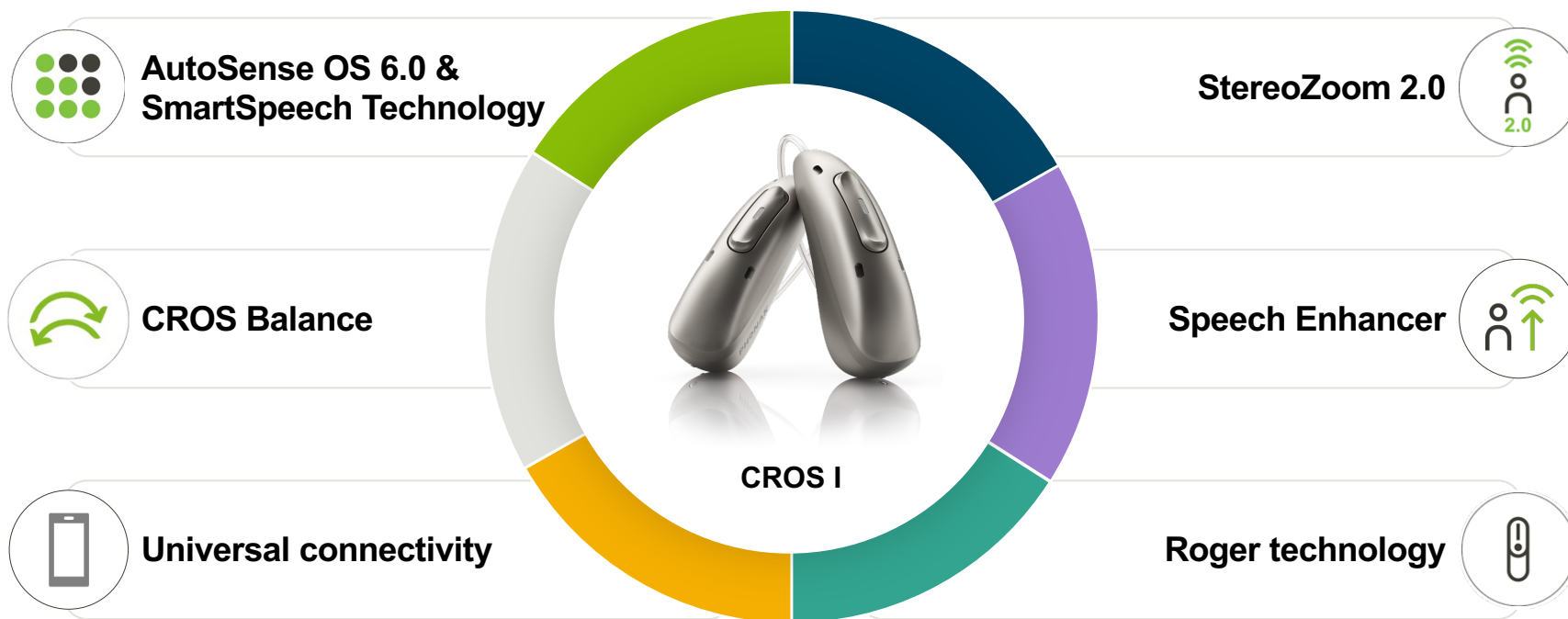
Naída L- PR



Sky L-PR

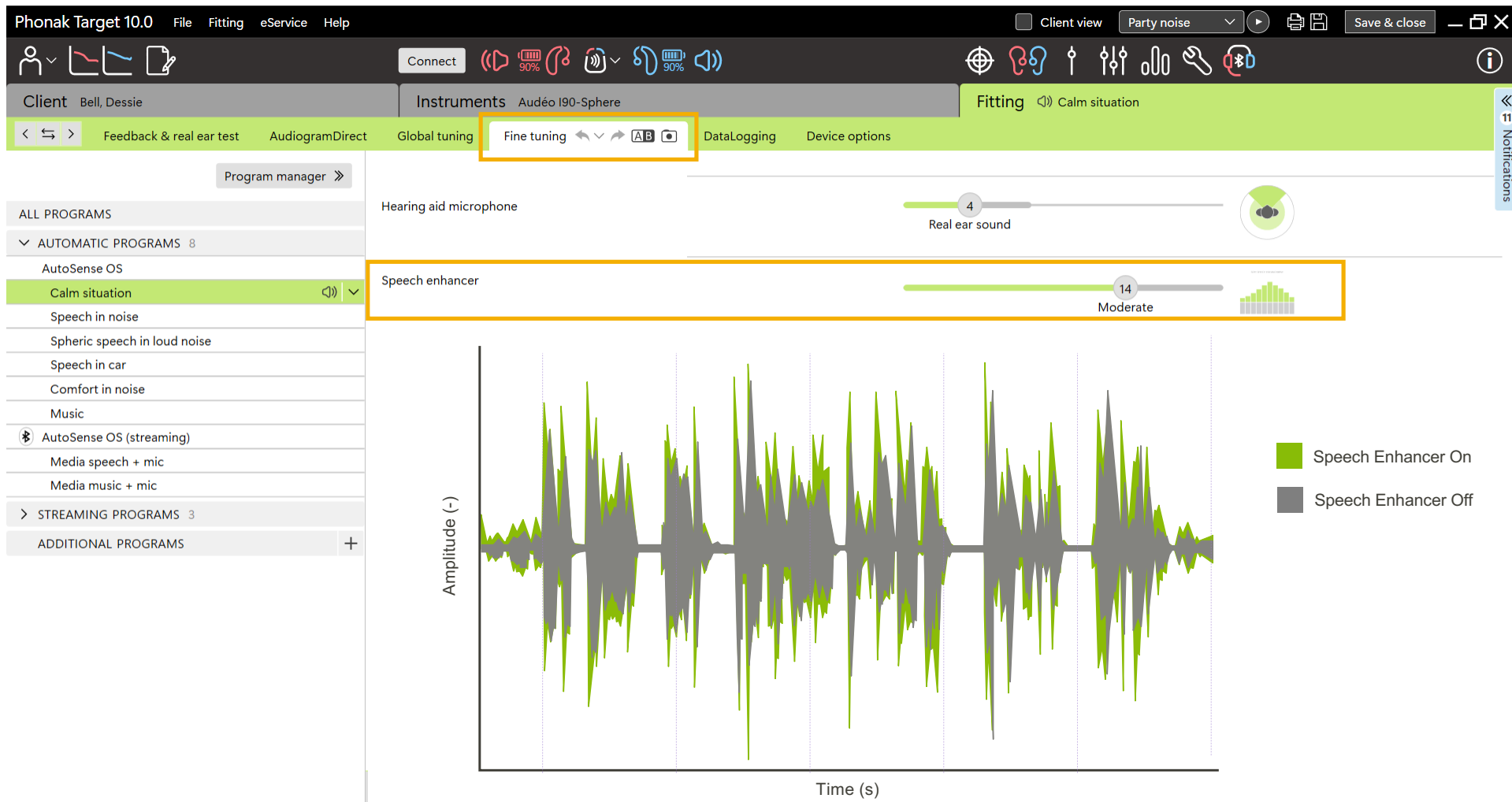


CROS Infinio



Technology levels

AutoSense OS™ 6.0	90 Premium	90 Premium	70 Advanced
	Speech in loud noise*	Speech in loud noise*	Music
	Music	Music	Speech in car
	Speech in car	Speech in car	Comfort in noise
	Comfort in noise	Comfort in noise	Speech in noise
	Speech in noise	Speech in noise	Calm situation
	Calm situation	Calm situation	Streaming speech*
	Streaming speech*	Streaming speech*	Streaming music*
	Streaming music*	Streaming music*	StereoZoom 2.0*
	StereoZoom 2.0*	StereoZoom 2.0*	Dynamic Noise Cancellation*
SmartSpeech Technology	Dynamic Noise Cancellation*	Dynamic Noise Cancellation*	Motion Sensor Hearing*
	Motion Sensor Hearing*	Motion Sensor Hearing*	Speech in loud noise* (manual)
	Speech Enhancer	Speech Enhancer	
	StereoZoom 2.0*	StereoZoom 2.0*	
	Dynamic Noise Cancellation*	Dynamic Noise Cancellation*	
Roger Technology	Speech Enhancer	Speech Enhancer	
	StereoZoom 2.0*	StereoZoom 2.0*	
	Dynamic Noise Cancellation*	Dynamic Noise Cancellation*	
	Motion Sensor Hearing*	Motion Sensor Hearing*	
	Speech in loud noise*	Speech in loud noise*	
DuoPhone*		DuoPhone*	Roger Technology
Real Far Sound		Real Far Sound	Real Far Sound



Speech Enhancer

34%

Less listening effort with speech from a distance¹

45%

Less effort when listening to speech from another room²

21%

Less fatigue at the end of the day¹



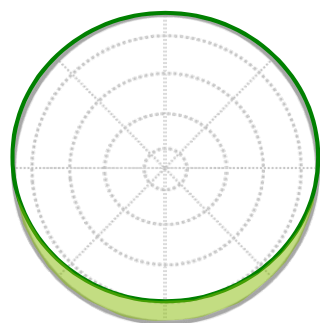
Improved memory and comprehension performance¹

*Speech Enhancer on versus off

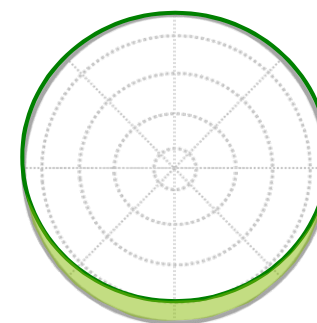
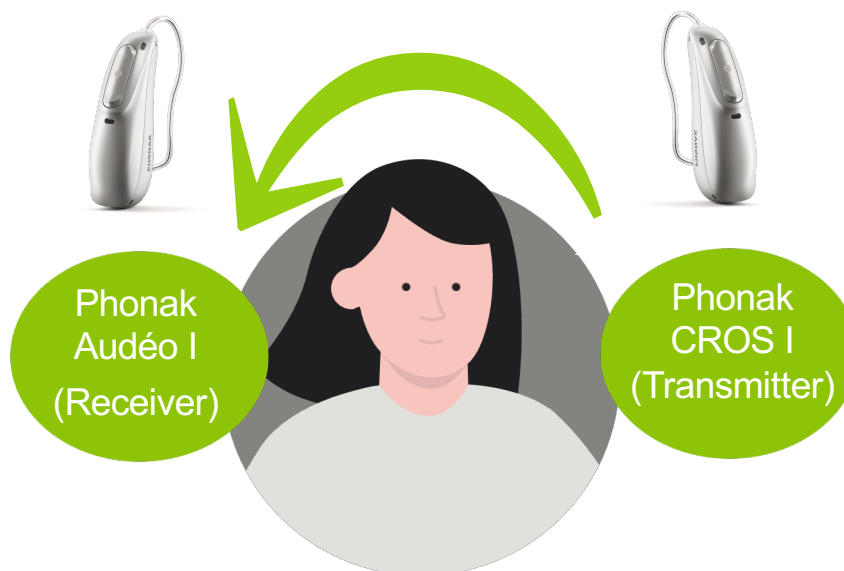
1. Latzel, M, Heeren, J and Lesimple, C. (2024) "Speech Enhancer reduces listening effort and fatigue." Phonak Field Study News retrieved from www.phonak.com/evidence

2. Appleton-Huber, J et al "Speech Enhancer reduces listening effort of speech from adjacent room." Phonak Field Study News in preparation expected July 2024

CROS Infinio in Calm

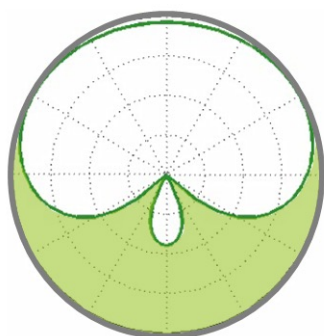


Real Ear Sound

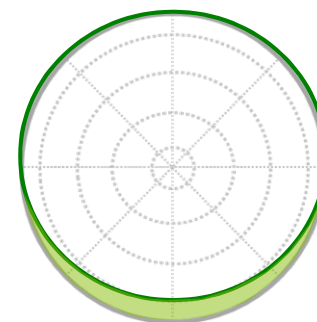
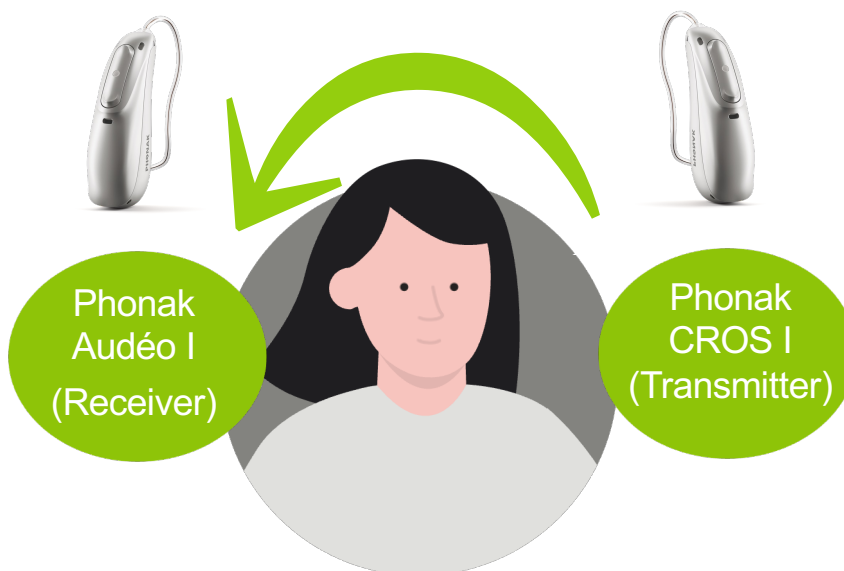


Real Ear Sound

CROS Infinio in Speech in Noise

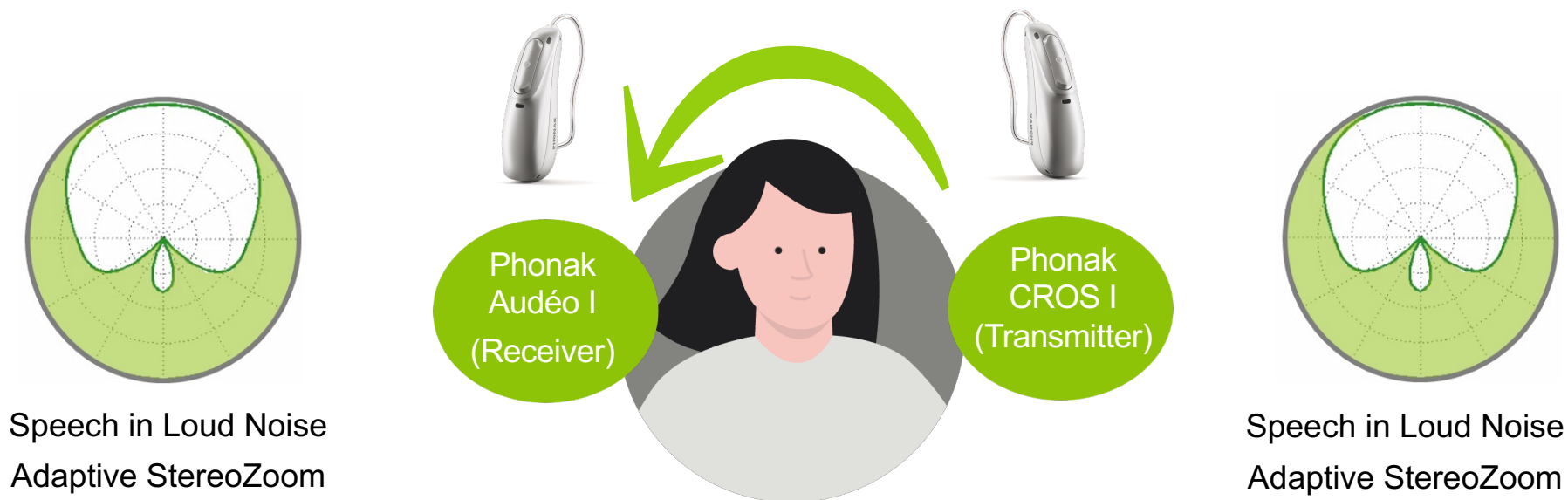


UltraZoom



Real Ear Sound

CROS Infinio in Speech in Loud Noise



Audéo I 90 – Speech in Loud Noise part of AutoSense OS automatic program

Audéo I 70 – Speech in Loud Noise is a manual choice program



CROS in Target.

®

No hearing aid

Show allLatestCompatible

Filters

Search...

Audéo I

4

-
-
- Audéo I90-R
Premium 71/132 (2cc)
-
-
- Audéo I70-R
Advanced 71/132 (2cc)
-
-
- Audéo I50-R
Standard 71/132 (2cc)
-
-
- Audéo I30-R
Essential 71/132 (2cc)

CROS

1

-
-
- CROS I-R
CROS transmitter
-

CROS I-R



→ Acoustic parameters

CROS I-R

DESCRIPTION

Water resistant CROS transmitter (rechargeable) for the unaidable ear. Wireless.

FEATURES

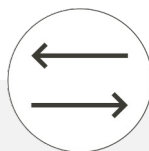
- Compatible with Audéo I-R
- StereoZoom 2.0 (with 70/90 devices)
- CROS balance
- Rechargeable
- Tap control (with 70/90 devices)
- Water resistant

> More information

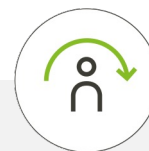
Connection to Phonak Target



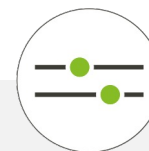
Connect to
**Phonak
Target**
using
**Noahlink
Wireless**



Enable
BVST



CROS
transmitter
is active
during
the fitting
process



Fine tuning
is done in
real time

Client

Test, CROS

Instruments

Audéo I90-R / CROS I-R

Fitting

Calm situation

<

↶

>

Hearing aids

Acoustic parameters

Details

Accessories

®

Audéo I90-R (M)

SN: SN95027346



Gain

51 (2cc)

MPO

114 (2cc)

Receiver

M

Show all

Latest

Compatible

▼

Audéo I



Audéo I90-Sphere

Premium 71/132 (2cc)



Audéo I70-Sphere

Advanced 71/132 (2cc)



Audéo I90-R

Premium 71/132 (2cc)



Audéo I70-R

Advanced 71/132 (2cc)



Audéo I50-R

Standard 71/132 (2cc)



Audéo I30-R

Essential 71/132 (2cc)

>

Audéo L

14

▼

CROS

1



CROS I-R

CROS transmitter

Connect

75%

75%

75%

Phonak Target

Connect

75%

75%

75%

The Instruments Audéo I90-R / CROS I-R

Automatically save and restart the hearing aids to make it audible?

OK

Cancel

Close

• SpeechSensor

• Speech enhancer

• Health functionalities

• Speech in car

• SoundRecover2

• SoundRelax

• Tap control

• Motion sensor hearing

• WindBlock

• RogerDirect

• Water resistant

>

More information

→ Acoustic parameters

UP

71/132 (2cc)

cancellation

0

FITTING FORMULA

 Adaptive Phonak Digital 3.0 

 Not available

 HEARING AID MICROPHONE



±0 steps

 CROS MICROPHONE



±0 steps

HEARING AID



±0



CROS balance

CROS



±0



Initial fitting

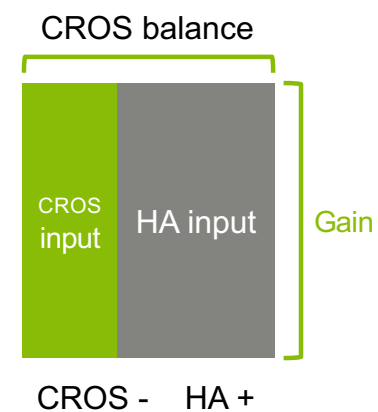
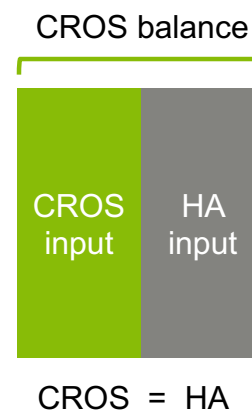
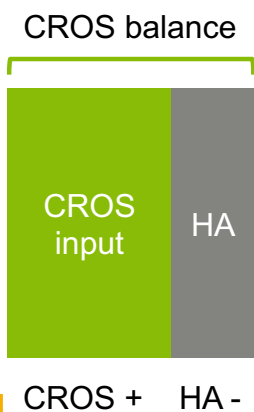
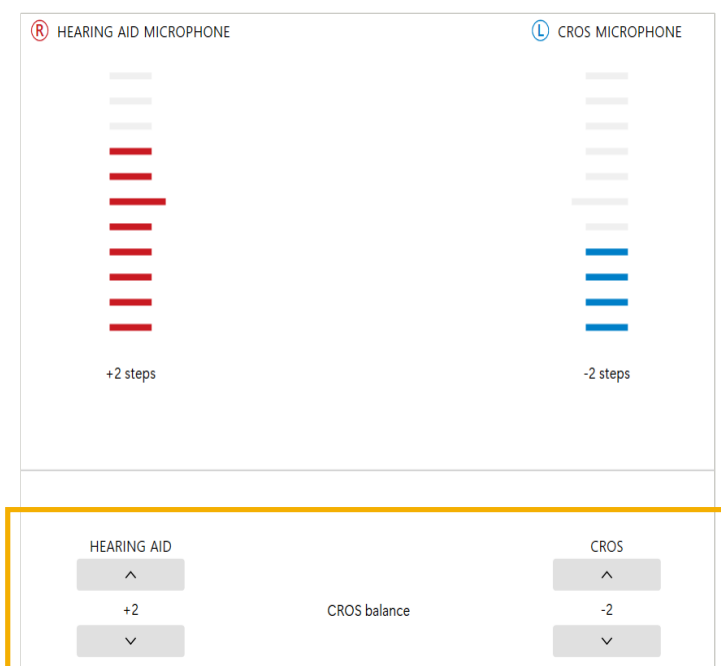
TargetMatch 2.0

CROS balance

SoundRecover

Tinnitus balance

CROS Balance in Target



HEARING AIDS

R: SN95027346
L: SN51642915

ROGER RECEIVER

R: No Roger receiver installed

SERVICES

Reports...

Check warranty

Available apps

Phone compatibility

Hearing aid support

Accessory & charger support

Behavior

Standard

SHORT PRESS

R: Volume
±10 dB (±5 steps)

L: CROS balance*

* An increase will increase CROS and
reduce hearing aid side and vice versa

LONG PRESS

Program change
AutoSense OS (Startup)
Button down has same function

DOUBLE TAP

No function in Standard

BUTTON FUNCTIONS

Volume

Program change

Accept/end call

Mute/unmute mic (not for phone call)

TAP CONTROL

Accept/end call

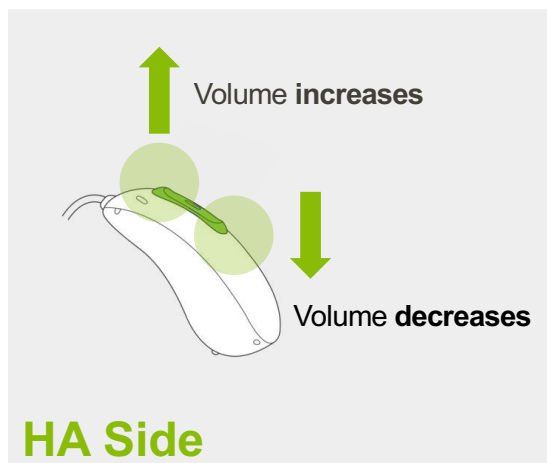
Pause/resume streaming

Start/stop voice assistant

Training & sensitivity...

L

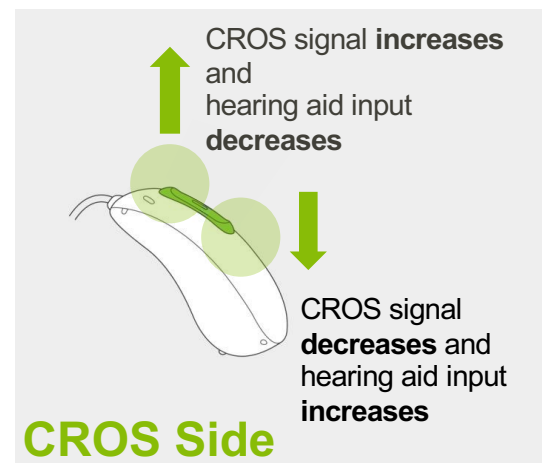
R



Behavior
Standard

Streaming

SHORT PRESS
R: Volume
±10 dB (±5 steps)
L: CROS balance*
* An increase will increase CROS and reduce hearing aid side and vice versa



BUTTON FUNCTIONS

- ☒ Volume
- ☒ Program change
- ☒ Accept/end call
- ☐ Mute/unmute mic (not for phone call)

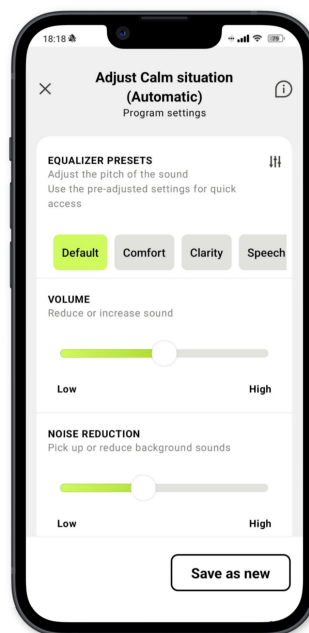
TAP CONTROL

- ☐ Accept/end call
- ☐ Pause/resume streaming
- ☐ Start/stop voice assistant
- Training & sensitivity...

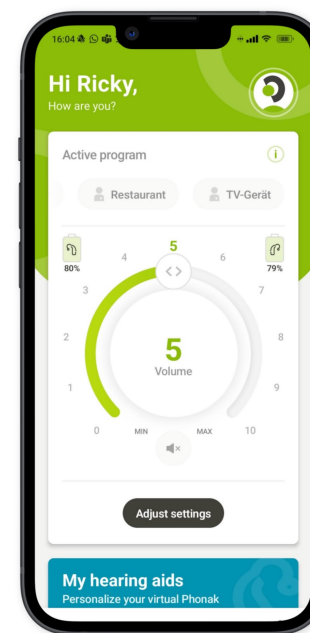
Manual controls
Bluetooth
Signals & alerts
Startup

myPhonak and myPhonak Junior apps for an optimized listening experience

- Access Remote Support appointments
- Adjust volume of CROS system
- View battery life status
- Option to “Stay Connected” to the app



myPhonak:
CROS Infino
CROS Lumity
CROS Paradise



myPhonak Junior:
CROS Lumity
CROS Paradise

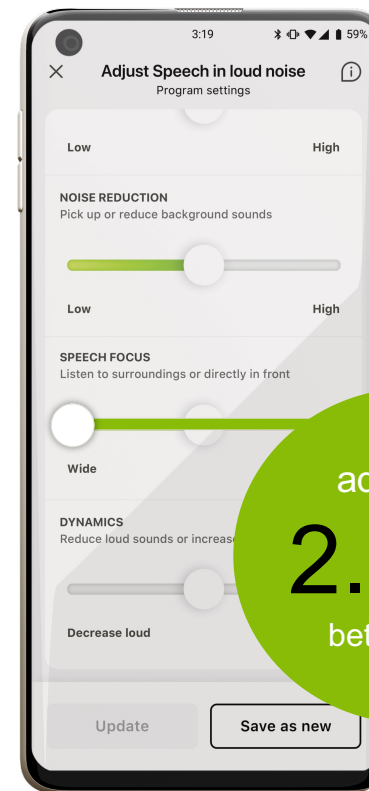


* Requires compatible hearing aid

StereoZoom 2.0 for maximum benefit in CROS



* Compared to default setting



CROS mute and CROS Balance



UHL: Aidable and unaidable

**Unilateral
hearing loss**

Aidable UHL

Benefit from



Audéo and Roger

Unaidable UHL

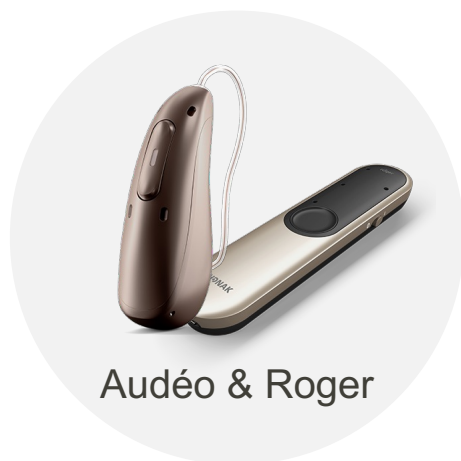
Benefit from



CROS system

Roger Focus II

UHL: flexible options for a personalized solution



Audéo & Roger



CROS system



Roger Focus II

The benefits of CROS Infinio



1

Improved speech understanding in noisy environments*¹

2

Follow** conversations wherever they are coming from*¹

3

Improved subjective ease of communication and sound quality¹

4

Universal connectivity to smartphones, TV, Roger and more

5

Easy to use and rechargeable

1. Stewart, E. & Woodward, J. (2021). Out of the (Head) Shadow: A Systematic Review of CROS/BiCROS Literature. *The Hearing Review*, 28(8), 22-25. Retrieved from <https://www.hearingreview.com/inside-hearing/research/head>, accessed October 7, 2021.

* when using a CROS system compared to unaided

** Follow - means awareness of conversation for the wearer to attend to

CROS I-R is powered by a lithium-ion rechargeable battery

Unlock a world of possibilities with CROS



I can recognize the nature of sounds more quickly

I miss fewer words throughout the day

I'm more aware of my environment

Social situations are less daunting

I'm less worn out physically and mentally

It's easier to hear in a classroom setting

I feel like less of a burden

I don't have to keep turning!

I can hear speech from my weak side

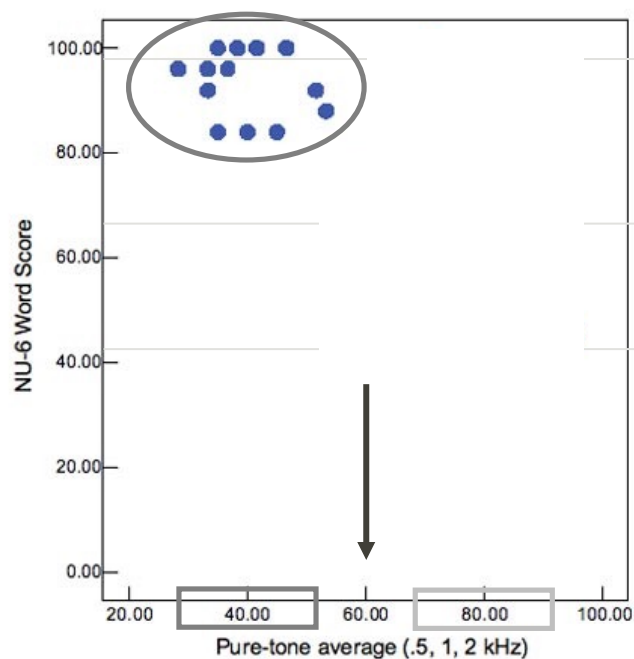
I feel safer overall



PHONAK
life is on

Severe to profound
hearing loss

Severe to profound hearing loss is not predictable



- Excellent benefit from amplification
- Very good benefit from amplification
- Benefit from amplification
- Counsel about realistic expectations
- Amplification indicated
- Poor outcome anticipated
- Consider referral for CI

Severe to profound hearing loss: Small population, big challenges



Loss of auditory
resolution

Harder to tell the difference
between different speech sounds



Loss of high frequency
hearing

Harder to hear soft or high-pitched
sounds and voices



Loss of signal-to-noise
ratio

Harder to hear in noisy environments

Power is in our DNA



Super-
Front
1978



NovoForte
AudioZoom
1990



Naída
2007



Naída Q
2012



Naída
Belong
2018



Naída P
2021

1987
PicoForte



2002
Supero



2011
Naída



2016
Naída
Link



2019
Naída
Link M



2023
Naída L



Phonak Naída™ Lumity a BTE for every hearing loss



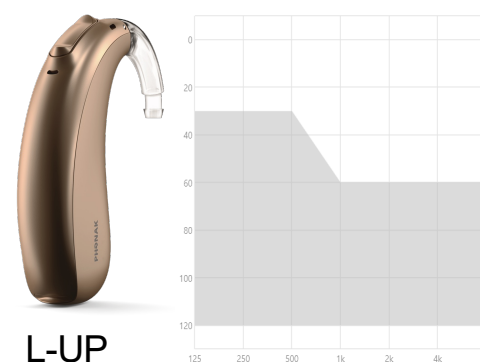
L-PR

Mild to moderately-severe



L-SP

Moderate to severe



L-UP

Severe to profound

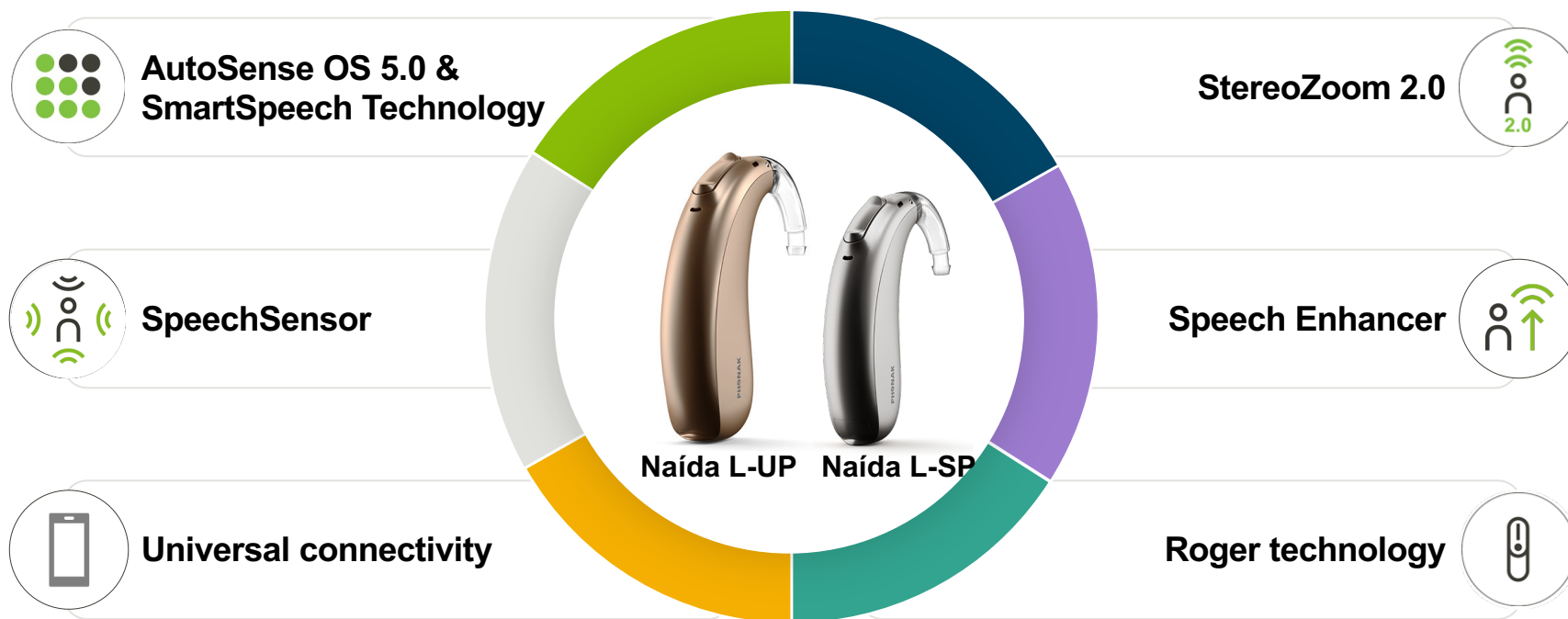
Combi BTE 2



Size 13 Zinc-air battery
Battery Life:
143 h HE 11; 136 h HE 11 680

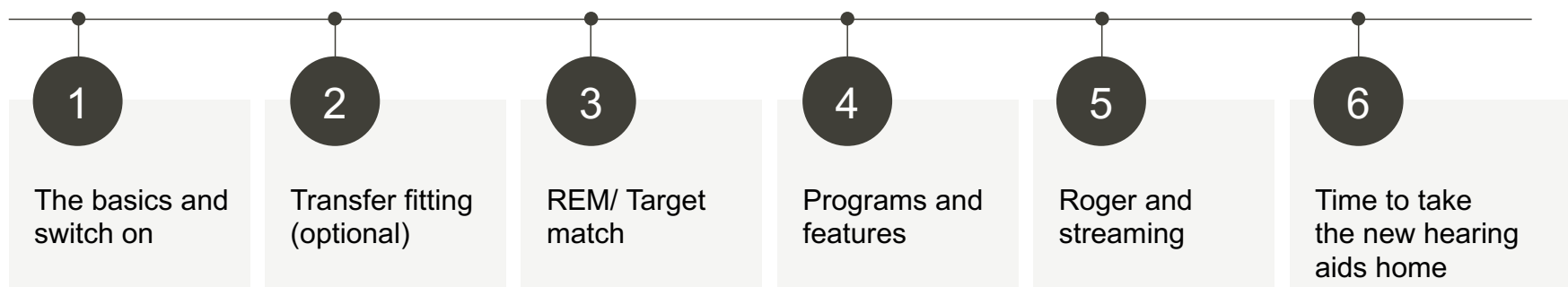
Size 675 Zinc-air battery
Battery Life:
188 h HE 11; 221 h HE 11 680

Naída Lumity

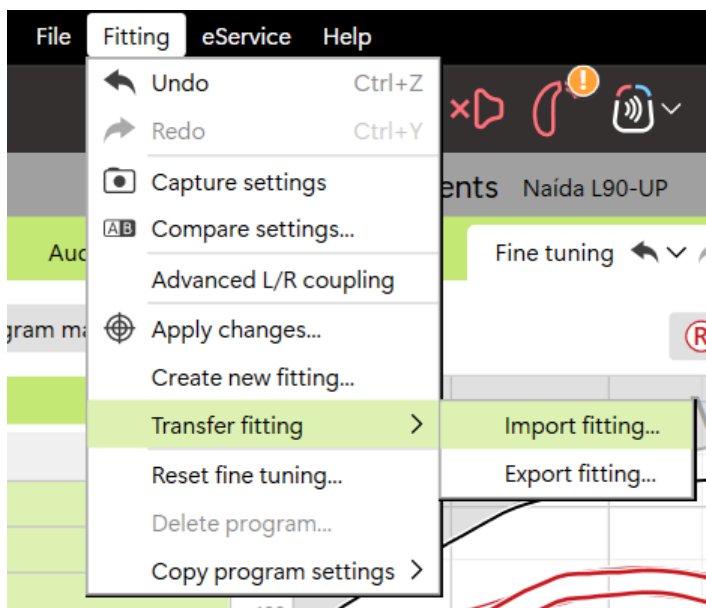


A successful fitting of Naída Lumity

6 steps to a successful fitting of Naída Lumity



Transfer fitting



WILL transfer: program structure, fitting formula, global gain level, compression setting.



WILL NOT transfer: feedback threshold, acoustic parameters, AudiogramDirect, TargetMatch, tinnitus settings, and program options. These will be reset to recommended values.



Recommended: run the Feedback test and review the Acoustic parameters before starting the transfer process.

Program setup

Client S2P, Test

Feedback & real ear test AudiogramDirect

Program manager »

ALL PROGRAMS

- ▼ AUTOMATIC PROGRAMS 9
 - AutoSense OS 5.0
 - Calm situation
 - Speech in noise
 - Speech in loud noise
 - Speech in car
 - Comfort in noise
 - Comfort in echo
 - Music
 - AutoSense OS 5.0 (streaming)
 - Media speech + mic
 - Media music + mic
- > STREAMING PROGRAMS 3
- ADDITIONAL PROGRAMS +

Client S2P, Test Instruments Naída L90-UP

Feedback & real ear test AudiogramDirect Global tuning Fine tuning

« Program manager

▼ AUTOMATIC PROGRAMS 9	ACCESS	STARTUP	PROGRAM NAME
AutoSense OS 5.0	✓		
Calm situation	✓		
Speech in noise			
Speech in loud noise			
Speech in car			
Comfort in noise			
Comfort in echo			
Music			
AutoSense OS 5.0 (streaming)			
Media speech + mic			
Media music + mic			
> STREAMING PROGRAMS 3			
+ ADDITIONAL PROGRAMS 1			
1 Calm situation		1	Custom name...

Severe to profound hearing loss: Small population, big challenges



Loss of auditory
resolution



Loss of high frequency
hearing



Loss of signal-to-noise
ratio

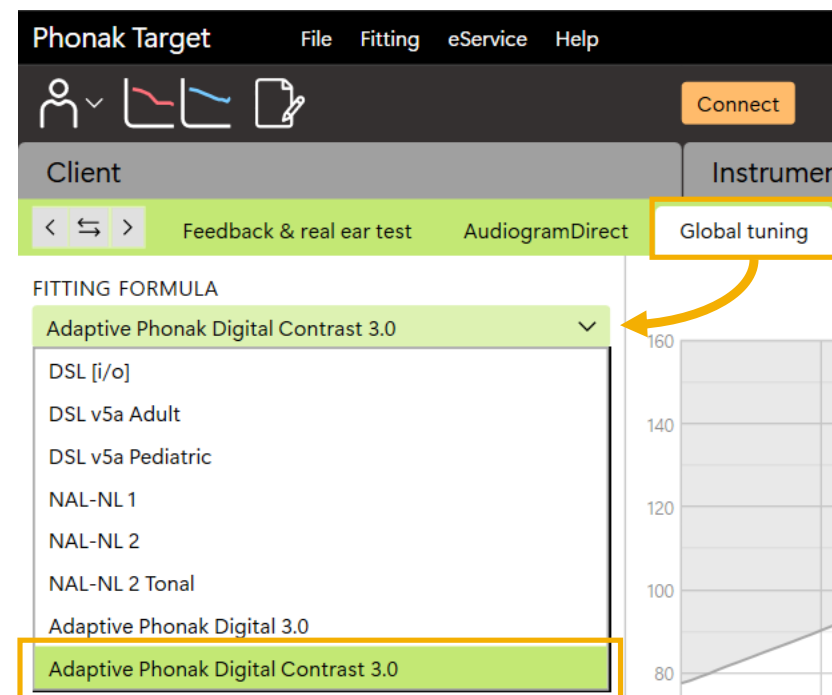
Adaptive Phonak Digital Contrast

Adaptive Phonak Digital Contrast

What patients would benefit from APDC with Slow Compression?

- **Experienced** users
- Have **average dynamic range**
- Have **poor speech discrimination** based on audiogram
- Are **not adjusting** well to amplification
- Have achieved audibility, but **clarity is still not there**- “I hear but don’t understand”

Global Tuning → Fitting Formula



*Windle, R., Dillon, H., & Heinrich, A. (2023). A review of auditory processing and cognitive change during normal ageing, and the implications for setting hearing aids for older adults. *Frontiers in Neurology*, 14, Article 1122420. <https://doi.org/10.3389/fneur.2023.1122420>

Severe to profound hearing loss: Small population, big challenges



Loss of auditory
resolution

Adaptive Phonak Digital Contrast



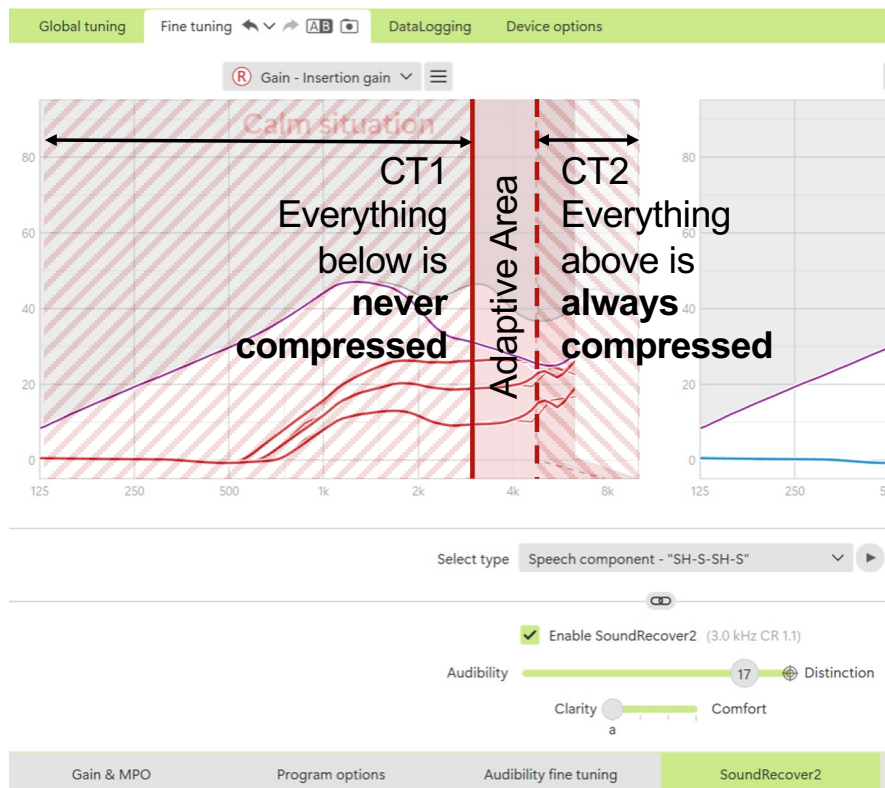
Loss of high frequency
hearing

SoundRecover 2

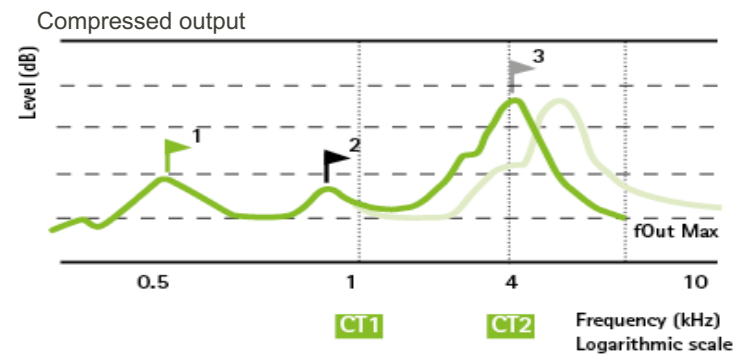


Loss of signal-to-noise
ratio

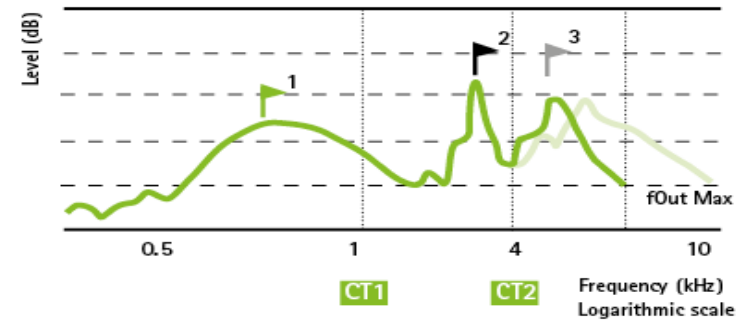
SoundRecover2



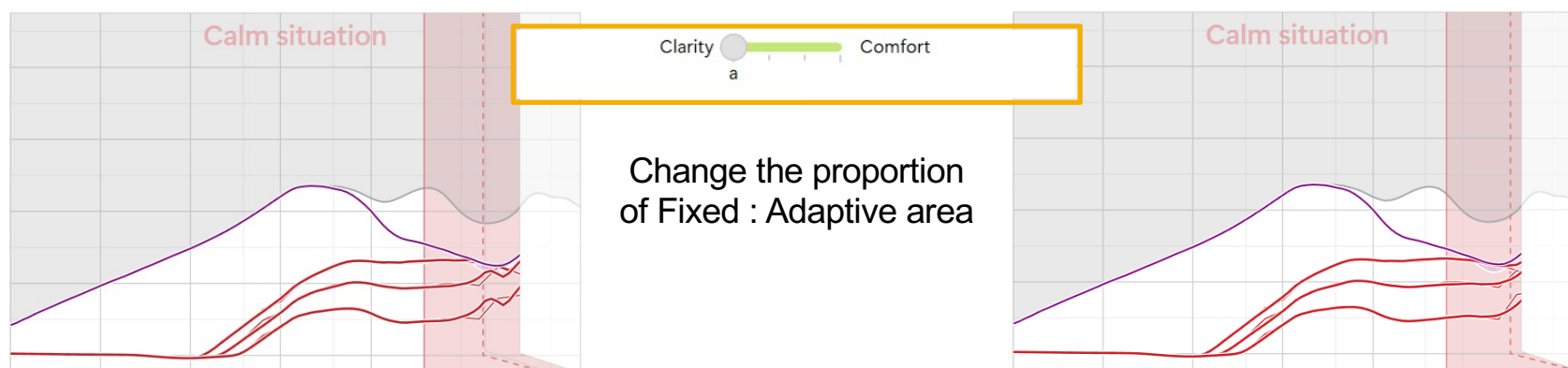
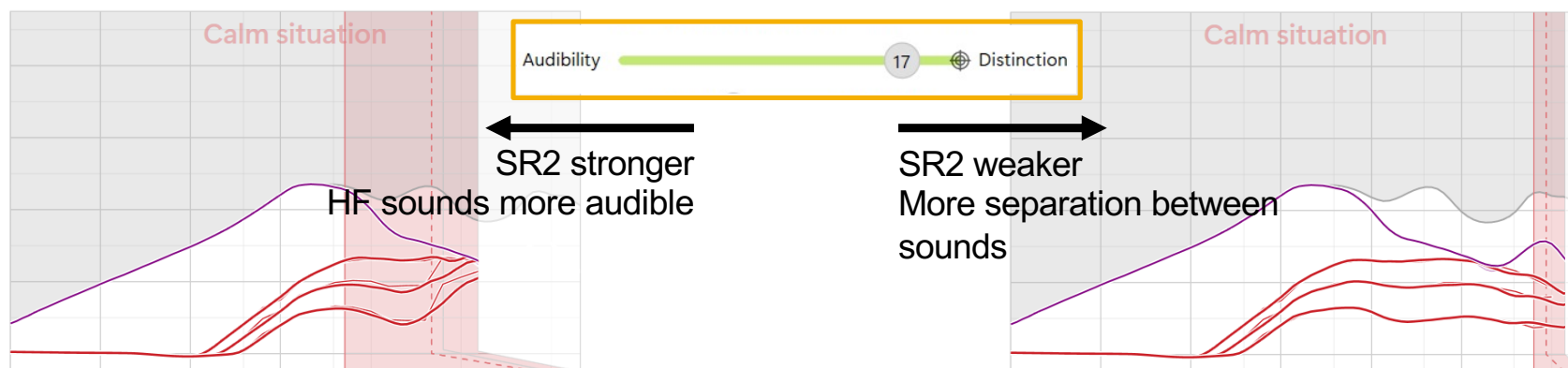
Input with significant high frequency energy present



Input with significant low/mid frequency energy present



SoundRecover2



Customized – Independent right/left calculations



Severe to profound hearing loss: Small population, big challenges



Loss of auditory
resolution

Adaptive Phonak Digital Contrast



Loss of high frequency
hearing

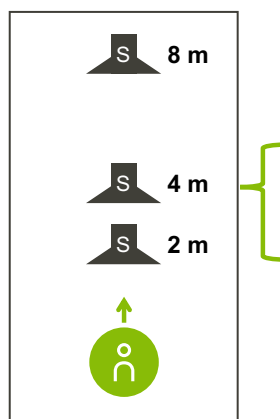
SoundRecover 2



Loss of signal-to-noise
ratio

**Speech Enhancer
StereoZoom 2.0**

Speech Enhancer for patients with severe-to-profound hearing loss



Quiet room Speech Enhancer activated

41.5% reduced listening effort at 8 m

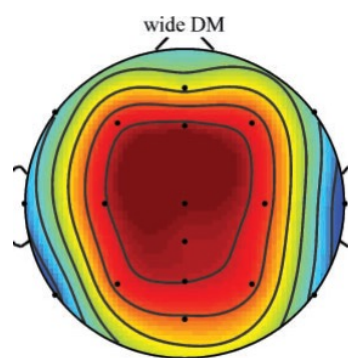
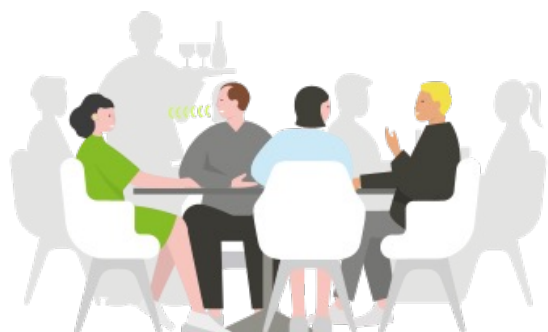
22% better speech understanding at 4 m

34.6% reduced listening effort at 4 m

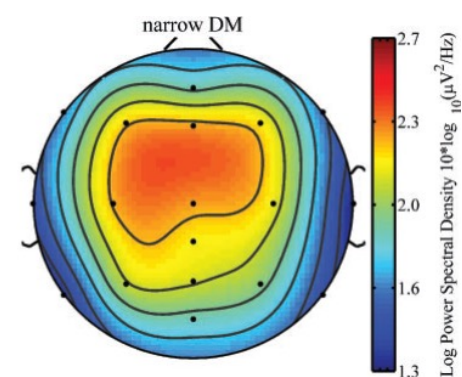
24.6% reduced listening effort at 2 m

For severe to profound hearing loss, the reduction in listening effort increased as the speech came from further away with Speech Enhancer activated.

Reduced listening effort in noise with StereoZoom



Real Ear Sound



StereoZoom

Up to **24% less** subjective listening effort and **less EEG activity** with StereoZoom.

Speech in Loud Noise activation level

The screenshot shows the Phonak fitting software interface. The top bar includes 'Client: S2P, Test', 'Instruments: Naída L90-UP', and 'Fitting: Calm situation'. The main menu has tabs for 'Feedback & real ear test', 'AudiogramDirect', 'Global tuning', 'Fine tuning', 'DataLogging', and 'Device options'. The 'Program manager' is open on the left, showing a list of programs under 'AUTOMATIC PROGRAMS'. The 'AutoSense OS 5.0' program is selected and highlighted with an orange box. The 'Program options' tab is active at the bottom, showing settings for 'AutoSense OS 5.0'. The 'Program transition speed' is set to 2 (Balanced). The 'Speech in loud noise' option is checked under 'Enable as automatic program'. The 'Activation level' is set to 10 (Loud noise), which is highlighted with an orange box. Below the interface, two arrows point left and right from the 'Activation level' slider, with text explaining the effect of the level setting.

Client: S2P, Test Instruments: Naída L90-UP Fitting: Calm situation

Feedback & real ear test AudiogramDirect Global tuning Fine tuning DataLogging Device options

Program manager »

ALL PROGRAMS

▼ AUTOMATIC PROGRAMS 9

AutoSense OS 5.0

Calm situation

Speech in noise

Speech in loud noise

Speech in car

Comfort in noise

Comfort in echo

Music

AutoSense OS 5.0 (streaming)

Media speech + mic

Media music + mic

> STREAMING PROGRAMS 3

ADDITIONAL PROGRAMS +

Program transition speed

2 Balanced

"Speech in loud noise" in automatic programs

✓ Enable as automatic program

Activation level

10 Loud noise

Gain & MPO Program options Audibility fine tuning SoundRecover2 Automatic fine tuning

← A lower level of noise will trigger the switch to this program so it is activated **more often**

→ A higher level of noise is needed to trigger the switch so it is activated **less often**

Connect to the world around you with Universal Bluetooth® connectivity



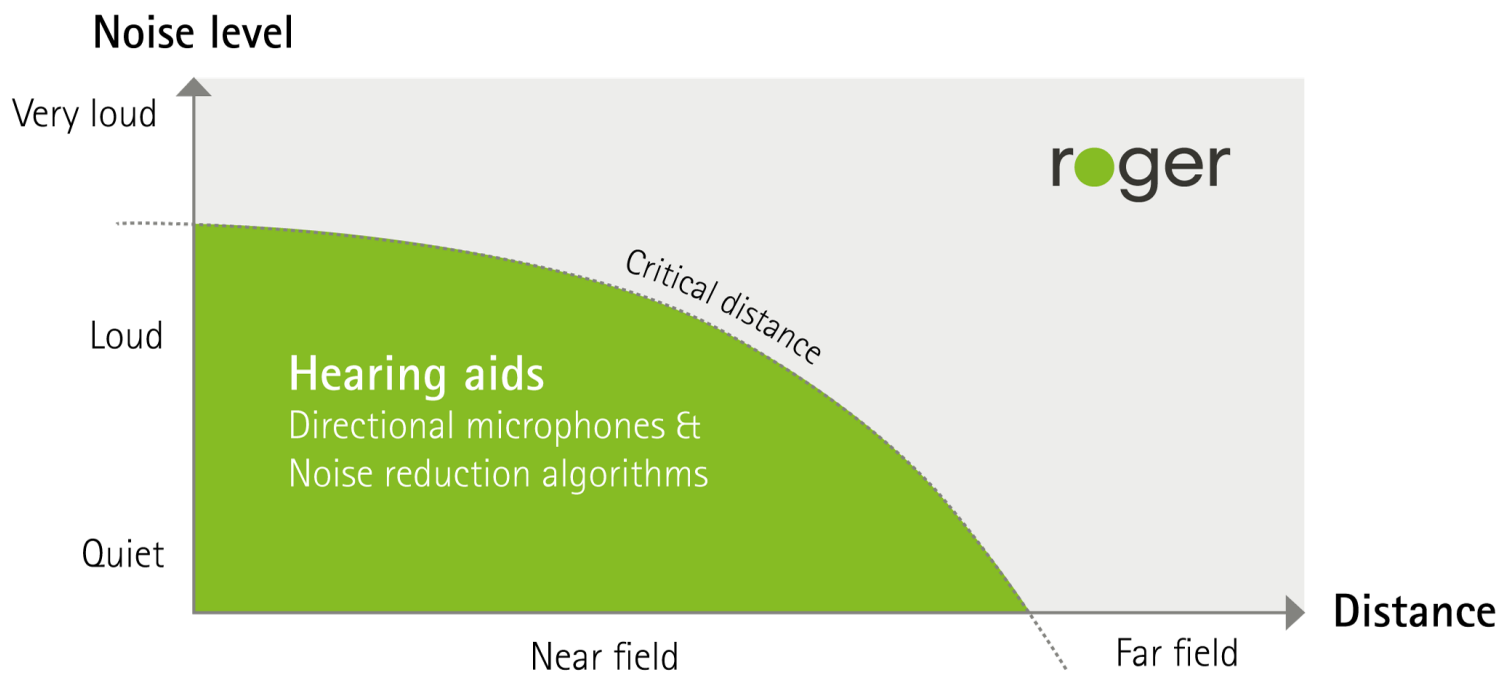
MFA is Made for all
smartphones with hands-
free calls



Bluetooth compatible
devices



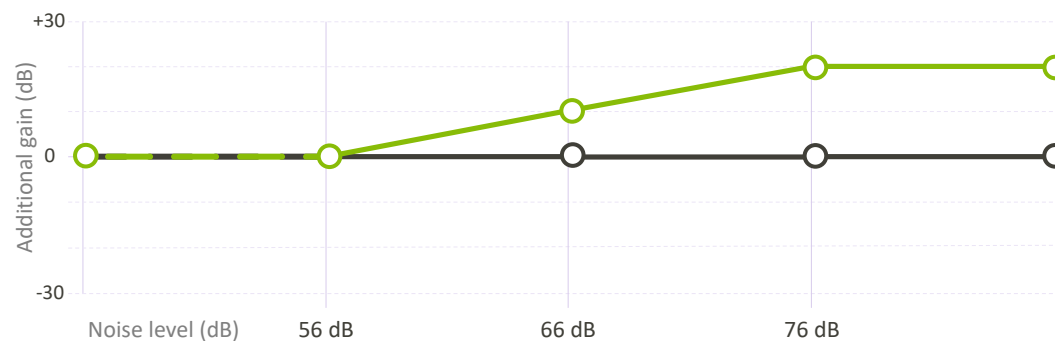
Connect to the world around you with Roger technology



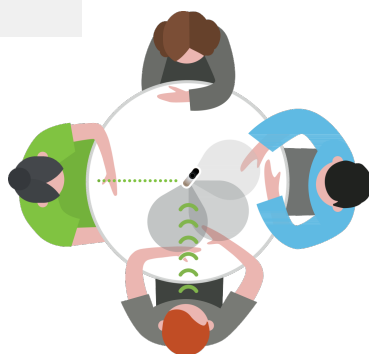
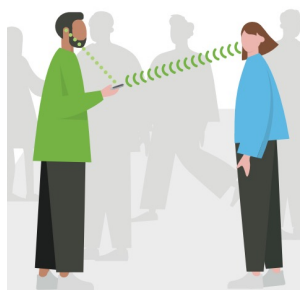
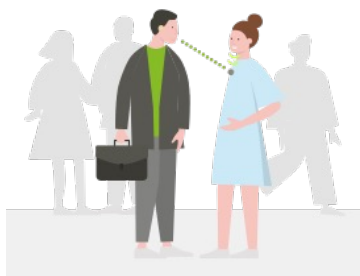
Roger for proven performance



Adaptive Gain provides
proven SNR improvement



Connect to the world around you with Roger technology



Adults with severe to profound hearing loss reported **“less listening fatigue and more confidence, independence, social inclusion and engagement, and quality of life when using a wireless microphone system like Roger technology.”***

* Scarinci, Nerina, Nickbakht, Mansoureh, Timmer, Barbra H., Ekberg, Katie, Cheng, Bonnie and Hickson, Louise (2022). A qualitative investigation of patients, significant others, and clinicians' experiences of using wireless microphone systems to manage hearing impairment. *Audiology Research*, 12 (6), 596-619. doi: 10.3390/audiolres12060059

Auditory training should be a fundamental part of hearing healthcare



HearingSuccess.com



Resources

Phonak Quick Practice Guideline

The Phonak quick guide to the management of
severe to profound hearing loss in adults

April 2020

Introduction

The consequences of severe to profound hearing loss dramatically changes the life experience and opportunities of those with the hearing loss and the

Severe to profound hearing loss has been found to negatively affect quality of life, regardless of age or suddenness of onset (Carlsson et al., 2014) and to





Unilateral Hearing Loss (UHL)



Severe to profound Hearing Loss

Unique challenges

Products

Programming

Beyond the HA



Together,
we change lives

References

- Appleton-Huber, J et al (2024). "Speech Enhancer reduces listening effort of speech from adjacent room." Phonak Field Study News. www.Phonak.com/evidence
- Folkeard, P., Saleh, H., Kuehnel, V. , Voss S, Qian, J., & Scollie, S. (2023). The BiCROS experience: A patient oriented approach to investigate subjective outcomes using questionnaires, and a patient perspective of BiCROS preference. Poster displayed at AAA publication pending
- Fulton, B., Huang, H., Tian, X., Latzel, M., & Guan, J. (2024, February 15 – 17). Improving speech cue audibility for adults with profound hearing loss. [Paper presentation], American Auditory Society Scientific and Technology Meeting, Scottsdale, AZ, United States.
- Latzel, M, Heeren, J and Lesimple, C. (2024) "Speech Enhancer reduces listening effort and fatigue." Phonak Field Study News retrieved from www.phonak.com/evidence
- Picou, E. M., Davis, H., Lewis, D., & Tharpe, A. M. (2020). Contralateral Routing of Signal Systems Can Improve Speech Recognition and Comprehension in Dynamic Classrooms. J Speech Lang Hear Res, 63(7), 2468-2482. https://doi.org/10.1044/2020_JSLHR-19-00411
- Scarinci, Nerina, Nickbakht, Mansoureh, Timmer, Barbra H., Ekberg, Katie, Cheng, Bonnie and Hickson, Louise (2022). A qualitative investigation of patients, significant others, and clinicians' experiences of using wireless microphone systems to manage hearing impairment. Audiology Research, 12 (6), 596-619. doi: 10.3390/audiolres12060059
- Souza, P. (2009). Severe Hearing Loss – Recommendations for Fitting Amplification. Audiology Online, January 19. Reprinted with permission of AudiologyOnline
- Stewart, E. & Woodward, J. (2021). Out of the (Head) Shadow: A Systematic Review of CROS/BiCROS Literature. The Hearing Review, 28(8), 22-25. <https://www.hearingreview.com/inside-hearing/research/head>
- Sygrove, C. (2021). Take sudden hearing loss seriously! British Academy of Audiology (BAA) Magazine. Spring 2021.
- Thibodeau L. M. (2020). Benefits in Speech Recognition in Noise with Remote Wireless Microphones in Group Settings. Journal of the American Academy of Audiology, 31(6), 404–411.
- Windle, R., Dillon, H., & Heinrich, A. (2023). A review of auditory processing and cognitive change during normal ageing, and the implications for setting hearing aids for older adults. Frontiers in Neurology, 14, Article 1122420. <https://doi.org/10.3389/fneur.2023.1122420>
- Winneke, A., Schulte, M., Latzel, M., & Appleton-Huber, J. (2020a). Reduced listening effort in noise with StereoZoom in Naida. Phonak Field Study News retrieved from www.phonak.com/evidence