A Sonova brand



Rogerpedia.

Your A-Z of Roger[™] for children and teens



Enhance hearing performance

- Direct streaming to hearing aids
- Improved speech understanding in noise⁹
- Access to more words and more conversations²
- Access to multiple talkers

Content

- 4 Why does a child or teen need Roger?
- 6 What is Roger and who is a good Roger candidate?
- 8 Roger technology
- 10 Roger features for personal use
- **11** Roger features for classroom use
- 12 Roger portfolio for personal use
- 14 Roger portfolio for classroom use
- 16 Roger use cases for personal use
- 18 Roger use cases at school
- 20 How to demo Roger
- 22 Roger receiver overview
- 24 Cochlear implant compatibility overview
- 25 Phonak Naída Link and Sky Link compatibility
- 26 Additional Roger receiver information
- **27** Roger receiver colors
- **28** Roger client journey
- **30** Roger installation decision tree
- 31 References



Why does a child or teen need Roger?



80%

of families report greater responsiveness



35% of families report less frustration in their children Research tells us that there is a link between language exposure and child development. Being immersed in a language-rich environment (talking, reading aloud, music) play a pivotal role to be ready for school, as well as continuing to maximize auditory development throughout childhood and the teenage years.¹

A study demonstrated that the use of a Roger system at home provides preschool children with access to up to 11 more words a minute, compared to wearing hearing aids alone. That's approximately 5,300 more words in an 8 hour day. Based on an average hearing aid use time, this translates to a 42 % increase in caregiver talk made available to a child.²

Directional microphone technology, known to improve speech intelligibility in noise, often fails to provide benefit once the distance between the speaker and the listener increases, when there are zero or negative signal-to-noise ratios, or when there are multiple or moving noise sources or reverberation. Digital noise reduction may improve listening comfort and listening effort; however, it has minimal impact on improving speech intelligibility.³ Despite the technology incorporated in modern hearing aids, such as directional microphones and noise reduction algorithms, speech perception and intelligibility can still be compromised.

When a child is listening within 5 feet, they're in what's call the "near field." The hearing aid's directional mics can optimize speech intelligibility and listening comfort in the near field, even when noise is introduced.

However, when the listener is beyond that near field, the hearing aids need help to hear clearly in noise and distance. A Roger Mic can be used to maintain speech intelligibility and understanding while overcoming both noise and distance. This larger distance is referred to as the "far field".⁹

Placing a Roger microphone in close proximity to the speaker has several key benefits; it

- Effectively reduces the distance between speaker and listener (i.g. at the playground or in the classroom)
- Compensates for the effects of background noise and reverberation on the target signal (i.g. school gymnasium)
- Significantly improves signal-to-noise ratio (SNR), thereby improving speech intelligibility in noise and at a distance.⁴⁻⁸

Studies have demonstrated that remote-microphone devices that utilize adaptive digital technology (i.e. Roger) provide significantly more benefit for speech understanding in noise than non-adaptive remote microphones.⁹⁻¹¹



What is Roger and who is a good Roger candidate?



Roger candidate. Children or teens with:

- Any level or type of hearing loss
- Poor speech understanding in noise
- Cochlear implants and/or BAHAs
- Unilateral hearing loss
- Auditory processing disorders

With Roger, you can support children's learning and language development. It's the hearing companion that helps children focus, participate and thrive – in the classroom and everyday life.

- Infants and toddlers, to be able to hear speech, in order to develop speech and language and to communicate effectively.
- School-aged children, to hear and understand lessons for academic success.
- School-aged children, to interact with family and friends outside of the classroom and not feel out of place.
- Teen, to be able to follow and contribute to conversations in social and extracurricular activities.
- Parents who need a solution to help children and teens develop while they explore the world.

Roger technology

*RogerDirect means that Sky Marvel is up to 42% smaller and 32% lighter, compared to the Sky B-P device with design integrated Roger receiver.

Adaptive behavior

Roger microphones adjust their settings to the surrounding noise levels making them easy to use. The fully automatic signal processing offers a versatile solution that covers a wide range of listening situations effectively. If the noise level increases, the volume of the Roger system automatically increases, so the speaker's voice is heard above the noise.

Adaptive frequency hopping

Roger operates within the worldwide license-free ISM (Industry, Science, Medical) band at 2.4 GHz. As traffic can sometimes be dense in this band, the Phonak Roger wireless protocol broadcasts each packet of sound three times in short bursts of code at different channels within the ISM band.

The Roger microphones and receivers constantly communicate with each other to ensure that the system will hop frequencies adaptively to circumvent any blocked channels in order to mitigate any risk of interference or poor reception.

RogerDirect[™]

RogerDirect is an industry-first from Phonak that allows Roger microphones to stream directly to the hearing aids. After a simple installation of the receiver into the hearing aid, clients benefit from the proven performance of Roger, in noise and over distance⁹, without attaching an external receiver. This major innovation makes Roger technology easier to use and hearing aids smaller.*

Compatibility

Roger is compatible with virtually every hearing aid and cochlear implant that has a direct audio input or t-coil.

Roger and directional

The Roger and directional setting is exclusive to Phonak. It allows a Roger microphone to be used while also providing improved access to speech for voices in close proximity.

A good example is spontaneous partner work in a classroom. The young person needs to hear their peer and the teacher clearly. The Roger and directional setting adaptively activates directional mics on the hearing aid based on the environmental noise level to provide 26% better speech understanding in noisy environments.¹¹

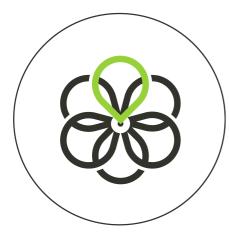
Automatic microphone modes

The Roger On, Roger Select and Roger Touchscreen Mic automatically recognize the sound environment and their positions, e.g. whether placed on a table, held in the hand or hanging around a neck thanks to the built-in accelerometer. This electromechanical component informs the microphone continuously about its orientation with respect to gravity.

It is the same component that makes pictures rotate in cell phones when the cell phone is rotated in the opposite direction. This orientation information (lying on the table horizontally, being worn around the neck, or being handheld), together with the information about the actual acoustical environment, i. e. the presence or absence of speech and noise and their levels, helps the device to automatically select its optimal microphone mode and gain settings. It also allows the device to mute the microphone if it is dropped. The landing is completely silent and the listener does not hear a loud bang. Within a few milliseconds after landing on the floor or table, the device will continue to operate normally.



Roger features for personal use



** The spatial information only works with hearing aids with RogerDirect.

MultiBeam 2.0 Technology

Based on proven MultiBeam Technology, the newest generation provides spatial information and stereo sound**.

By recognizing if the speech is coming from the left or the right side, this spatial information supports children and teens in conversations. Currently available in the Roger On only.

MultiBeam Technology

By utilizing multiple microphones in six directions, speech from 360 degrees is calculated and compared. The direction with the best signal-to-noise ratio is automatically selected. MultiBeam Technology provides improved speech understanding in group conversations¹² in noisy places. Available in the Roger Select and the Roger Table Mic II.

Pointing mode 2.0

A row of three microphones allows users to zoom in on the person talking. This enables the listener to point the microphone at who they want to hear while ignoring side conversations and environmental noise. Currently available in the Roger On only.

Headset mode

When connected to a computer via the USB cable, Roger On can be used like a headset during online calls. It streams the speech from the online participants to the hearing aids and in return picks up the speech from the hearing aid wearer and sends the signal to the computer. It provides better sound quality and less noise than using the integrated computer microphone and gives the benefits of a headset without having to wear a headset. Currently available in the new generation of Roger On.

MultiTalker Network

Unique to Roger the MultiTalker Network allows several Roger microphones to be used together, providing listeners with access to multiple talkers in any situation.

Roger features for classroom use

Small Group mode

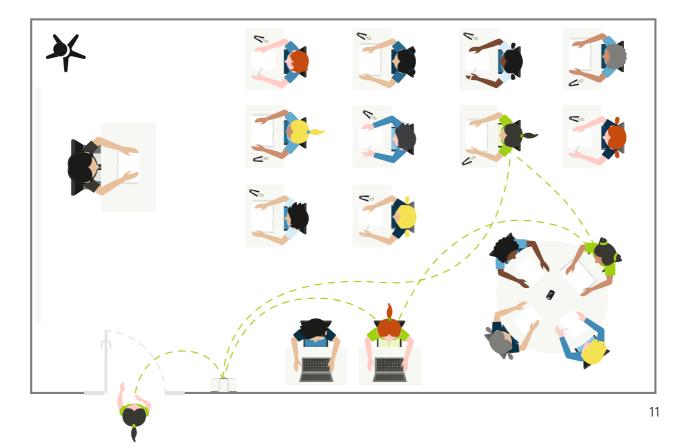
Used in the Roger Touchscreen Mic, it utilizes a system of three intelligent embedded microphones working together in an advanced and adaptive way. When the Roger Touchscreen Mic is placed on a table between 2–5 students, the microphones will automatically orient to the student who is talking in the group. In a study, 100% of children preferred listening to their peers using Small Group mode during classroom activities vs. the no-microphone mode.¹³

Pointing mode

It allows the user to hear a person positioned in close proximity by simply aiming the device at them. This simple, solution makes listening easy for clients who prefer to manage their own microphone. Available in the Roger Touchscreen Mic.

MultiTalker Network

Unique to Roger the MultiTalker Network allows several Roger microphones (Roger Touchscreen Mic, Roger Pass-around and Roger Multimedia Hub) to be used together, providing children with access to multiple talkers to ensure they can hear all talkers or instructional media sources.



PH_Brochure_Rogerpediapediatric_210x280_EN_028-3079-02.indd 12

12

Roger portfolio for personal use



Roger On[™] / Roger On[™] iN

Versatile microphone designed to take on difficult and ever-changing listening situations. Featuring the new MultiBeam 2.0 Technology and the Pointing Mode 2.0, it gives people the flexibility to focus on the conversations that truly matter. In addition, the new generation of Roger On comes with the headset mode designed to handle online calls with ease.



Roger Select[™] / Roger Select[™] iN

Ideal microphone for stationary situations where background noise is present. When placed in the center of a table, it discreetly and automatically selects the person who is talking and seamlessly switches from one talker to another. When multiple conversations take place, the listener can manually select whom to listen to.



Roger Touchscreen Mic

The user interface makes Roger Touchscreen Mic simple and intuitive to use. With an automatic microphone function, it conveniently switches from an individual talker to a small group interaction mode, depending on its placement.



Roger Clip-On Mic

Small microphone designed for one-to-one conversations. Featuring a directional microphone, the user can focus on a conversation with their partner.

The Roger On iN and Roger Select iN function just like their respective counterparts. The Roger iN microphones contain two Roger receivers that can be installed into a pair of Sonova hearing devices with RogerDirect. When using the original Roger Select microphone with Sonova hearing devices with RogerDirect, disable the Bluetooth.

The Bluetooth® word mark and logos are registered trademarks owned by Bluetooth SIG, Inc. and any use of such marks by Sonova Communications AG is under license. Other trademarks and trade names are those of their respective owners.

The wide range of Roger microphones offers a solution for every child or teen. Regardless of the type of hearing aids or cochlear implants that they currently use, the different Roger microphones are capable of effectively dealing with a variety of situations.



Roger portfolio for classroom use



The Roger for Education portfolio has been carefully designed for the classroom. From the Roger Touchscreen Mic and the Roger Pass-around, there is a solution for every student in all situations.



Roger Touchscreen Mic

The user interface makes Roger Touchscreen Mic simple and intuitive to 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 Multimedia Hub



Can be connected to any multimedia device used in a classroom – ranging from smartboards and TVs to computers and videos. When the Roger Multimedia Hub is used in a network, the audio mixing feature allows a teacher's voice to be heard simultaneously with an audio signal.

The Roger Multimedia Hub can also be connected as a standalone media transmitter by an individual student. Optimal for listening to an audiobook, using a tablet or computer.



Roger Pass-around

Designed to enhance classroom discussions so that not only teachers, but all students are heard. Ideal for situations where there are several talkers, the Roger Pass-around can be handed from one person to another or placed in the sturdy stand in front of the student. The Roger Pass-around is automatically activated by voice or can be configured for Push-to-Talk functionality.



Roger DigiMaster

Positioned in the classroom, Roger DigiMaster loudspeaker has multiple speakers within the tower. 12 individual speakers in the Roger DigiMaster 5000, and 15 in the Roger DigiMaster 7000. By using cylindrical sound dispersion, the teacher's voice is distributed almost equally through the room. Like all other Roger devices, the system is adaptive, helping the teacher's voice stay above the noise.

Roger use cases for personal use



Mealtimes

Keeping up with dynamic conversations is made especially hard due to the complex mix of voices, background noise and clinking cutlery. For a child or teen to be an active participant in a conversation, they need to hear everyone at the table.

Playing games

Playing a game with the whole family or friends can be great, but listening from across the room can be difficult, especially when there is background noise. Using a Roger microphone around the neck helps as it picks-up speech and transmits directly to the hearing aids.

Parks and playgrounds

Outdoors places come with a completely different set of challenges. A child is not always close to the parents and speech reading is virtually impossible due to constant movement and activity. Using Roger microphones help to stay connected.



Sport activities

Kids or teens with hearing loss find it easier to respond to a coach's instructions when they can hear commands directly, regardless of where they are on the court or the level of surrounding noise. This way, instead of missing out on useful advice, they can listen and get in the game.

Extracurricular activities and clubs

These activities are crucial for development. It is not only language skills, but important social skills that are also acquired through interaction with others. Being able to hear the leader and others in these group situations means less stress and more fun.

Car journeys

The constant hum from the vehicle along with road noise and other distracting sounds can make even a short trip frustrating for children or teens. The Roger microphones make the journeys more pleasant when they can hear and talk to their parents, even while sitting in the backseat.

Sitting in a stroller

Understanding speech can be especially difficult when sounds are coming from the back. For a child sitting in a stroller trying to listen to the person pushing them is definitely a case here Roger can help.

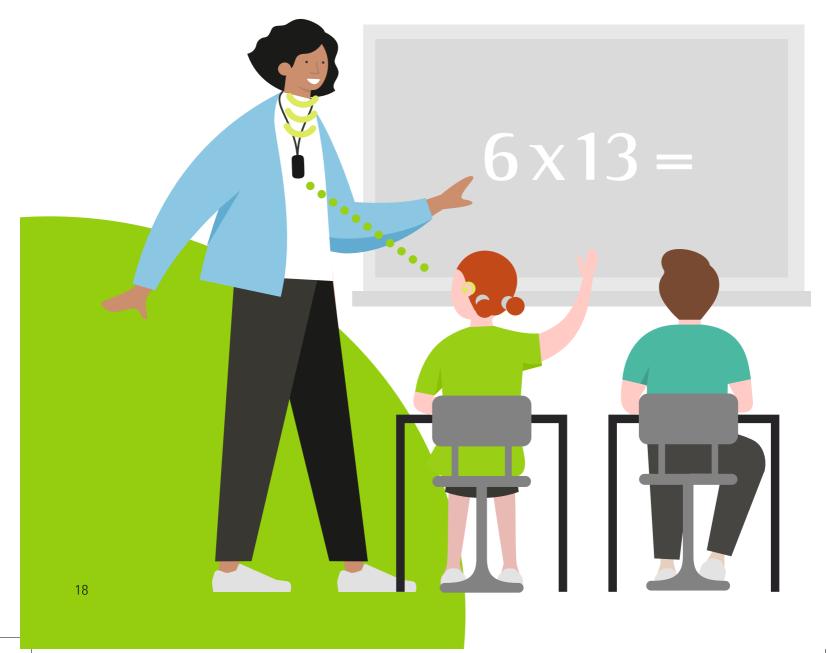
Connectivity

Smartphones are a daily part of a kid or teen's life today. Watching videos, playing games and listening to music is fun. Roger microphones connect to multimedia sources for streaming media.

| | |)

0

Roger use cases at school



PH_Brochure_Rogerpediapediatric_210x280_EN_028-3079-02.indd 18

P

6

Hearing teachers

Classrooms are a dynamic place for interaction and of course learning. Roger Touchscreen Mic sends the voice from the teacher wirelessly to the hearing aids. By reducing background noise and the distance between the student and the speaker children can hear their teachers.

Hearing classmates

When class discussions start, a child with hearing loss should not miss out on the questions, answers and comments of classmates. The small Roger Pass-around, either held near the mouth or placed in its small table stand, allows for each child to be heard.

Learning with supportive audio material

For teaching with supportive audio material, like video or music, the Roger Multimedia Hub can be added to the network and used by plugging it into the audio out (i. e. headphone) jack of the audio source. Alternatively, the device can be used as a stand-alone transmitter for independent work, like listening to an audiobook.



Amplifying sounds

Positioned in the classroom, Roger SoundField makes sure the teacher's voice is distributed almost equally through the room and help the teacher's voice to stay above the noise.

How to demo Roger

A live demonstration efficiently shows clients the value of using Roger. During the counseling process, a demonstration of the recommended solution shows how Roger microphones address clients' needs. We recommend that both a child or teen and parent are involved in the demonstration to experience and examine the solution.



We recommend using Roger On for all in-office demonstrations. Choose the right receiver for your client:

Your client has	Receiver to choose	Steps before demo	Steps after demo
Hearing devices with RogerDirect™ (e. g. Phonak Audéo L™ P-312)	1 Roger On iN trial 2 Roger X	Install Roger X / Roger On iN trial into both hearing devices	Uninstall Roger from both hearing devices and re-install into Roger X / Roger On iN trial
Phonak Lumity and Paradise Trial [™] devices with RogerDirect [™] pre-installed Roger receivers	N/A (Receiver option 02 is pre-installed)	None	None
Hearing devices with T-Coil	Roger NeckLoop	Place Roger NeckLoop around the neck of the client, and make sure their hearing devices have been switched to a t-coil program.	Take Roger NeckLoop back and restart hearing devices
Hearing devices with Europlug-compatible streaming accessory (e.g. ComPilot II, GN ReSound MultiMic)	1 Roger X	Plug Roger X into streaming accessory and make sure hearing devices is in streaming program	Unplug Roger X from the streaming accessory and restart the hearing devices

Noise source

- Use environmental noise due to location of office or group of people (i.e. outside or nearby café)
- Or produce noise through loudspeakers placed 1 meter from client and microphone (noise level recommended at 75 dB)

• The speaker, the loudspeaker and the client should be in the same room

Getting started

- Ensure each participant has the appropriate receivers and can access the Roger signal. Family and friends can participate using Roger NeckLoop with headphones or an MLx Audio Checker with Roger X
- Power on fully charged Roger On
- Hold Roger On within 10 cm / 4 inches of the Roger receiver (Hearing device with RogerDirect, Roger NeckLoop or Roger X) and press Connect button
- Speak into Roger On and confirm all listeners can hear you

Demo Roger On

- Demonstrate table mode with MultiBeam 2.0 Technology
- Demonstrate lapel mode by walking a few steps away from the client
- Demonstrate beam steering selection via myRogerMic app
- Demonstrate pointing mode 2.0 by giving the microphone to your client and standing approximately 2 m away from them
- When possible, have the active speaker be a friend or family member
- While performing a Roger demonstration, we recommend listening along using a Roger NeckLoop and headphones or MLx Audio check with Roger X
- Other Roger microphones can be included in the demonstration, including Roger Clip-On Mic, Roger Select/Select iN, and Roger Table Mic II/Table Mic II iN
- Refer to the Roger demo guide for further information about demonstrations of other Roger microphones

Roger receiver overview

Option (02)/(03)



Phonak hearing aid compatibility overview

Phonak Lumity, Paradise and Marvel hearing aids include **RogerDirect**. RogerDirect streams the Roger signal directly from the Roger microphone to the hearing aid without having to attach an external receiver.

			RogerDirect ¹	Roger Neckloop ²
		Audéo L-R	•*	
	RIC	Audéo L-RT	•	•
		Audéo L-RL	•	
>	ici 🕂	Sky L-UP	•	•
Lumity	Pedi- atric	Sky L-PR	•	
3	Power	Naida L-UP	•	•
	Pov	Naida L-PR	•	
	CROS	CROS L-R	•	
	Slim	Phonak Slim L	•	
		Phonak Audéo P-R Fit	•	•
		Phonak Audéo P-R Life	•	
	RIC	Phonak Audéo P-312	•	
		Phonak Audéo P-13T	•	•
		Phonak Audéo P-R	•	
Paradise		Phonak Audéo P-RT	•	•
ara	BTE	Phonak Naída P-PR	•	
<u> </u>		Phonak Naída P-UP	•	•
	ITE	Phonak Virto P-312	•	
		Phonak Virto P-312 NW 0		•
	E	Phonak Virto P-10 NW 0		•
		Phonak Virto P-Titanium		•
		Phonak Audéo M-312	•	
		Phonak Audéo M-R	•	
	RIC	Phonak Audéo M-312T	•	•
		Phonak Audéo M-13T	•	•
		Phonak Audéo M-RT	•	•
		Phonak Bolero M-M	•	•
<u>.</u>	BTE	Phonak Bolero M-PR	•	
Marvel		Phonak Naída M-SP	•	•
Σ		Phonak Sky M-M	•	•
	Pediatric	Phonak Sky M-PR	•	
	Pe	Phonak Sky M-SP	•	•
		Phonak Virto M-312	•	
	Ë	Phonak Virto M-312 NW O		•
	<u> </u>	Phonak Virto M-10 NW 0		•
		Phonak Virto M-Titanium		•

Roger systems are compatible with most manufacturer hearing aids, cochlear implants and BAHAs. Find your perfect match using the Roger configurator. **Click here**

- 1 RogerDirect requires Roger installation. There are two ways to install the Roger receiver into the Phonak hearing devices with RogerDirect:
 - via a Roger iN microphone, e.g. Roger On iN, Roger Select iN, Roger Table Mic II iN
 - via a Roger X (with serial number higher than 1744xxxx) and the Roger Installer
 - RogerDirect is also available in the latest HI from Unitron and Hansaton
- 2 Only with T-Coil
- * except Audéo L20-R

Water resistance: IP68³ for Roger 18 and Roger 19 Infant security: Tamperproof housing kit for babies and toddlers (0–36 months) available for Roger 18 and Roger 19

				Design-integrated for Phonak hearing aids			Universal	
				Roger 19	Roger 18	Roger X	Audio shoe	Roger NeckLoop
						lie		Ø
			Phonak Audéo B-13	-	•	•	AS18	
			Phonak Audéo B-312T			•1	7510	•
			Phonak Audéo B-312			•1		
		RIC	Phonak Audéo B-10			•1		
			Phonak Audéo B-R			•1		
			Phonak Audéo B-Direct					
			Phonak Bolero B-M			•1		•
		ш	Phonak Bolero B-P		•	•	AS18	•
		BTB	Phonak Bolero B-SP		•	•	AS18	•
			Phonak Bolero B-PR			•1	7.510	•
			Phonak Sky B-M			•1		•
		Power	Phonak Sky B-P		•	•	AS18	•
	Belong		Phonak Sky B-SP		•	•	AS18	•
			Phonak Sky B-UP	•		•	AS19	•
			Phonak Sky B-RIC		•	•	AS18	•
			Phonak Sky B-PR			• ¹		•
ds			Phonak Naída B-SP		•	•	AS18	•
a. a			Phonak Naída B-UP	•		•	AS19	•
Hearing aids			Phonak Naída B-R RIC			•1		
Hea		CROS	Phonak CROS B-13		•	•	AS18	•
		CR(Phonak CROS B-312 / R / ITE-312 / ITE-13			• ¹		
			Phonak Virto B-10 NW 0					• ²
		Custom	Phonak Virto B-10 0			• ¹		• ²
			Phonak Virto B-10			• ¹		•2
		Cu	Phonak Virto B-312			•1		• ²
			Phonak Virto B-13			• ¹		• ²
			Phonak Vitus+ micro					•
			Phonak Vitus+ P		•	•	AS18	•
		BTE	Phonak Vitus+ UP	•		•	AS19	•
		В	Phonak Vitus micro					•
	Basic		Phonak Vitus P		•	•	AS18	•
	Ba		Phonak Vitus UP	•		•	AS19	•
		RIC	Phonak Vitus+ RIC					•
		E	Phonak Vitus+ ITE-10					• ²
		Custom	Phonak Vitus+ ITE-312					•2
		Ũ	Phonak Vitus+ ITE-13					•2

1 Roger X must be used with a ComPilot II

2 Only with T-Coil

3 IP68 indicates that the hearing aid is water and dust resistant. It survived continuous immersion in 1 meter of fresh water for 60 minutes and 8 hours in a dust chamber as per the IEC60529 standard.

23

Cochlear implant compatibility overview

Infant security: Tamperproof lock for babies and toddlers (0–36 months) integrated in Roger 20 and Roger 21 Options: Protection sleeve available or Roger 14

			Design-integrated for implants			Universal				
			Roger Direct ¹	Roger 14	Roger 17	Roger 20	Roger 21	Roger X	Roger X interface	Roger NeckLoop
					0	9		and the second		P
		Naída CI M	•							•
	AB	Naída CI Q			•			•4		•
		Neptune						•2	Neptune Connect	
		Osia 2						•	Mini Microphone 2+	
	Cochlear	Nucleus 7 / Nucleus 8				•		•	Mini Microphone 2+	•
		Kanso / Kanso 2						•	Mini Microphone 2+	•
		Nucleus 5 / Nucleus 6		•				•3	Euro accessory adapter	•
		Baha 5 / Baha 6						•	Mini Microphone 2+	
lts		Baha 4						•		•
Implants		SONNET / SONNET 2					•	•	FM battery pack cover	•
<u></u>		RONDO 2 / RONDO 3								•
		ADHEAR						•	Adapter cable	
		SAMBA						•	miniTek	
		SAMBA 2						•	SAMBA 2 GO	
		OPUS 2						•	FM battery pack cover	•
		Neuro 2						•	Oticon Medical Streamer	•
con	lical	Neuro One						•		•
Otic	Med	Ponto 4 / Ponto 5						•	EduMic	
		Ponto 3						•	Oticon Medical Streamer	

- 1 RogerDirect requires Roger installation. There are two ways to install the Sonova receiver into the Sonova hearing devices with RogerDirect:
 - via a Roger iN microphone, e.g. Roger On iN, Roger Select iN, Roger Table Mic II iN
 - via a Roger X (with serial number higher than 1744xxxx) and the Roger Installer
- 2 Recommended CI profile 4/CI setting 4 and EasyGain +8dB.
- **3** Recommended CI profile 9/CI Setting 9
- 4 Roger X must be used with a ComPilot

Phonak Naída Link and Sky Link compatibility

			Universal		
	RogerDirect	– Roger X	Roger X interface	Roger NeckLoop	
		and the second s		Ø	
Phonak Sky Link M	•	•		•	
Phonak Naída Link M	•	•		•	
Phonak Naída Link RIC		•	AS15	•	
Phonak Naída Link UP		•	AS10	•	

Third party hearing aid compatibility overview

	Roger X	Roger NeckLoop ¹
	air	Ø
c Telecoil		•
Direct audio input / audio shoe	• Plug Roger X into corresponding audio shoe	
Streamer with 'Euro' socket e.g. Oticon Streamer Pro	• Plug Roger X into streamer	
Streamer with 'Euro' socket e.g. Oticon Streamer Pro Remote microphone with 'Euro' socket, e.g. GN ReSound MultiMic / Starkey Remote Microphone + / Oticon Edumic	• Plug Roger X into remote microphone	

Additional Roger receiver information

Key features

Additional adaptive gain

Roger receivers automatically adjust the output gain according to the surrounding noise level to maintain intelligibility in noisy environments. The noise level is measured by the Roger microphone and sent to the Roger receiver along with the audio signal.

Effective stand-by mode (only for external receivers)

Roger receivers automatically enter stand-by mode if the connected microphone is turned off or moves out of range. In stand-by mode power usage is reduced to increase the battery's life.

Check

This feature allows the user to quickly read receiver data and to check receiver functionality via Roger Touchscreen Mic.

Link quality measurement

The average wireless link quality can be checked via the Check feature. This gives the wearer of the Roger microphone information about the reception quality of the signal being transmitted via Roger Touchscreen Mic.

EasyGain

This enables the adjustment of a receiver's default output gain via Roger Touchscreen Mic.

Option (02) overview

Compatibility	With all Roger microphones
Adaptive gain	Yes
Effective stand-by mode	Yes
EasyGain adjustment	Yes*
Check	Yes
Link quality measurement	Yes

Option (02)

* except Roger NeckLoop



Roger receiver colors

For hearing aids



Roger 18



Roger 19

Color overview		AS18	AS19
Sand Beige	P1		
Champagne	P5		
Silver Gray	P6		
Graphite Gray	P7		
Velvet Black	P8		
Caribbean Pirate	Q3		
Precious Pink	T3		
Lava Red	M6		
Blue Ocean	M7		
Majesty Purple	M8		

For cochlear implants







Roger 14 Roger 17 Roger 20 Color overview White V6 Sand Beige P1 P4 Chestnut Silver Gray P6 P8 Velvet Black Ruby P9 Petrol Q1 Caribbean Pirate Q3 Alpine White XN/T7 Princess Pink XP Brown LO White L8 Black L9 M1 Beige/Sand Charcoal M2 T1 Mocha/Brown Smoke/Grey T2 Silver 5A Anthracite V1 Beige V2 V3 Black Ebony V4 Nordic Grey V5

Roger client journey

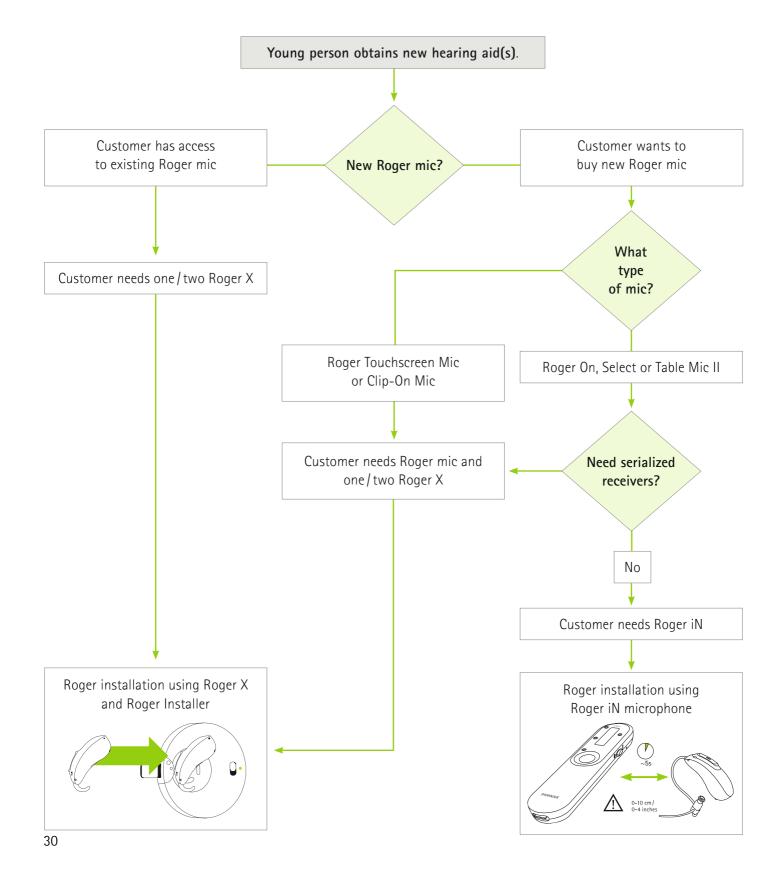
The earlier Roger technology is introduced, the more likely the client will purchase. Integrate Roger into the below touchpoints to build awareness and generate excitement before the sales conversation even starts!

Stage			Awareness		
Steps	Regularly experiences difficulty hearing	Investigates possible solutions	Schedules HCP consultation	Carries out a hearing needs assessment	Completes speech in noise testing
Touchpoints	 Advertising (digital/print) Word of mouth (friends/family) 	 Advertising and blogs Physician referrals Search engines Social media Website Word of mouth 	 Email Google listing Social media Telephone Website 	 Diagnostic room Front desk Questionnaire Waiting area 	 Counseling room Diagnostic room
Recommended tools	 Active client referral program Consistent marketing presence (digital £t traditional) Physician referral network 	 Digital content management Professional website design Search engine optimization Social media presence 	 Correct info in online listings Email protocol Front-office trainings Social media management strategy 	 Client intake questionnaire Digital intake process (optional) Waiting area collateral (brochures, posters & video) Roger Easy Guide 	 Office marketing collateral QuickSIN™ or Phonak LISN-S testing materials
	p	g Roger technology earlier in the hase allows for more time to tail ssaging to the specific needs of y	or	Before explaining their to aids and Roger to ensi the results, and gets a jurr	ure the client hears

Stage		Consideration	Purchase	Loyalty	
Steps	HA & Roger technology are recommended	In-office demo	Take-home trial	Purchase & fitting	Consistent use & advocacy
Touchpoints	 BtC brochure Business card Clinical paperwork Counseling room Follow-up call 	Trial productDemo guide	Trial productFollow-up	 Clinical paperwork Purchased products Reference guides Referral cards 	 Advertising Events Follow-ups Newsletter Referral cards Review sites
Recommended tools	 Business card Follow-up protocol Product brochures Summary handout 	Trial productDemo guideDemo training	Trial productDemo guides	 Appropriate paperwork Client referral cards Client referral strategy Products 	 Active client referral program Client reviews Consistent marketing presence Lead management for non-purchasers

Even if the client decides not to purchase Roger right away, the experience may enhance their understanding and increase acceptance of the solution.

Roger installation decision tree



References

- 1. Hart, B. & Risley, T. (1995). Meaningful differences in the everyday experience of young American children. Baltimore, MD: Paul H. Brookes Publishing.
- Benitez-Barrera, C. R., Angley G., & Tharpe, A. M. (2018). Remote microphone system use at home: Impact on caregiver talk. Journal of Speech, Language and Hearing Research, Vol. 61, 399–409.
- **3.** Bentler, R. (2005). Effectiveness of directional microphones and noise reduction schemes in hearing aids: A systematic review of the evidence. Journal of the American Academy of Audiology, 16(7), 473–484.
- **4.** Jerger, J., Chmiel, R., Florin, E., Pirozzolo, F., & Wilson, N. (1996). Comparison of conventional amplification and an assistive listening device in elderly persons. Ear and Hearing, 17, 490–504.
- **5.** Chisholm, T. (2007). Evidence for the use of hearing assistive technology by adults: The role of the FM system. Trends in Amplification, 11(2), 73–89.
- Lewis, M., Gallun, F., Gordon, J., Lilly, D., & Crandell, C. (n.d.). A pilot investigation regarding speech-recognition performance in noise for adults with hearing loss in the FM+HA listening condition. Volta Review, 110.
- Rodemark, K., & Galster, J. (2015). The benefit of remote microphones using four wireless protocols. Journal of the American Academy of Audiology, 26, 724–731.
- Wolfe, J., Duke, M., Schafer, E., Jones, C., Mulder, H., John, A., & Hudson, M. (2015). Adaptive digital remote microphone system and a digital remote microphone audio-streaming accessory system. American Journal of Audiology, 24(3), 440–450.
- **9.** Thibodeau, L. (2014). Comparison of speech recognition with adaptive digital and FM remote microphone hearing assistance technology by listeners who use hearing aids. American Journal of Audiology, 23(2), 201–210.
- DeCeulaer, G., Bestel, J., Mulder, H., Goldbeck, F., DeVarebeke, S., & Govaerts, P. (2016). Speech understanding in noise with the Roger Pen, Naida CI Q70 processor, and integrated Roger 17 receiver in a multi-talker network. European Archives of Otorhinolaryngology, 273(5), 1107–1114.
- **11.** Wagener, K., Vormann, M., Latzel, M., & Mulder, H. (2018). Effect of hearing aid directionality and remote microphone on speech intelligibility in complex listening situations. Trends in Hearing, 22, 1–12.
- 12. 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. https://doi.org/10.3766/jaaa.19060.
- 13.Rich, S. & Gigandet, X. (2016). Roger™ Touchscreen Mic Small Group mode: Changing the dynamics of group activities in the classroom. Phonak Insight. Retrieved from www.phonakpro.com/evidence, accessed December 9th, 2019.

life is on

Since 1947, Phonak is dedicated to preserving life quality by opening new acoustic worlds. Already back then, in the days of our foundation, our company was driven by a formative conviction: We believe that well-hearing equates to well-being and thus is essential for living life to the fullest. In fact, the sense of hearing is directly linked to social, emotional, cognitive and physical well-being. Today as in future, we thrive to offer the broadest portfolio of innovative hearing solutions. And, together with our hearing care professionals, we keep on focusing on what matters most: improving speech understanding, changing people's lives and having a positive effect on society as a whole.

www.phonak.com/roger







Sonova Communications AG Herrenschwandweg 4 CH-3280 Murten · Switzerland

