

Phonak Connectivity Essentials

Aly Hoffman, ScD

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

Connectivity Essentials.

A Phonak training module



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.

Learning objectives

After this course, participants will be able to:

- Describe the Bluetooth® pairing process, including phone settings to optimize
- List features available in the myPhonak app
- Explain connectivity troubleshooting steps



Course outline

Understanding Bluetooth® & Phonak Technology

Bluetooth® pairing and connections

myPhonak App introduction and setup

Bluetooth® troubleshooting



The Bluetooth® word mark and logos are registered trademarks owned by Bluetooth SIG, Inc. and any use of such marks by Sonova AG is under license.



Introduction: Why connectivity matters

Bluetooth is important to users

- Advanced features such as apps, Bluetooth connectivity and other wireless features result in higher satisfaction¹
- 96% of consumers with hearing loss report Bluetooth is a “**must have**”²



¹ Picou (2020), ² Frazier et al. (2024)
Full reference list available at the end of the presentation

Benefits to you and your clinic

By **mastering** Bluetooth and connectivity, you can:



Provide a hassle-free solution, that maximizes hearing performance from day one.



Increase the likelihood of purchasing premium hearing solutions.



Enhance appointment efficiency and reduce unnecessary clinic visits.



Boost user confidence, prevent frustration and improve retention.

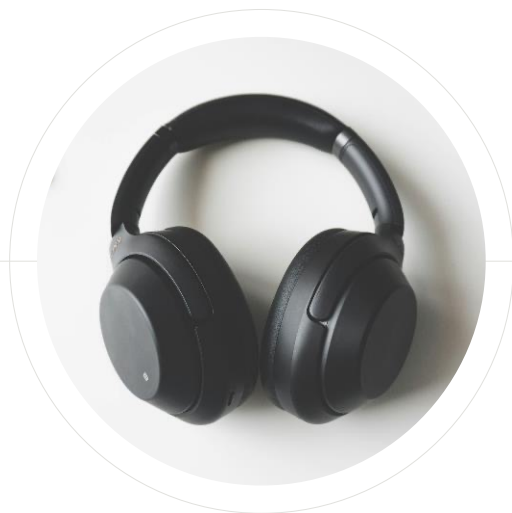


Strengthen your clinic's reputation and increase by providing excellent tech support.



Understanding Bluetooth & Phonak Technology

What is Bluetooth?



What is Bluetooth?

Bluetooth is an open, standardized specification.

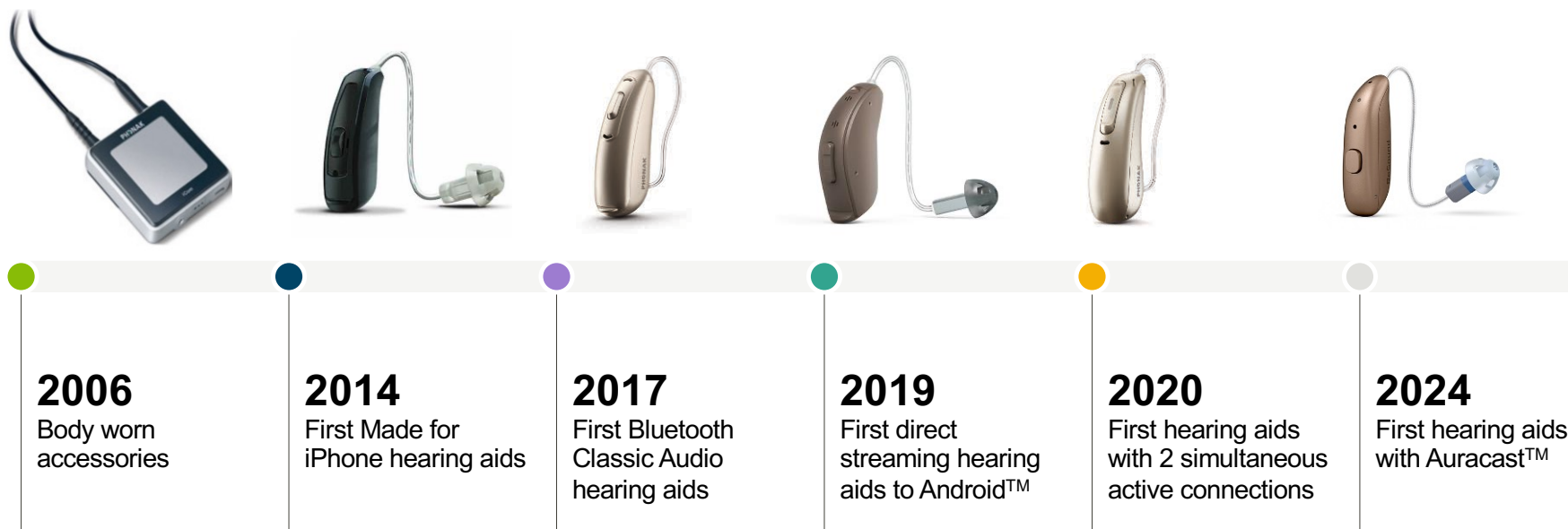
It allows wireless communication between devices, replacing cables and connectors.

It supports both voice (phone calls), media and data transmission.

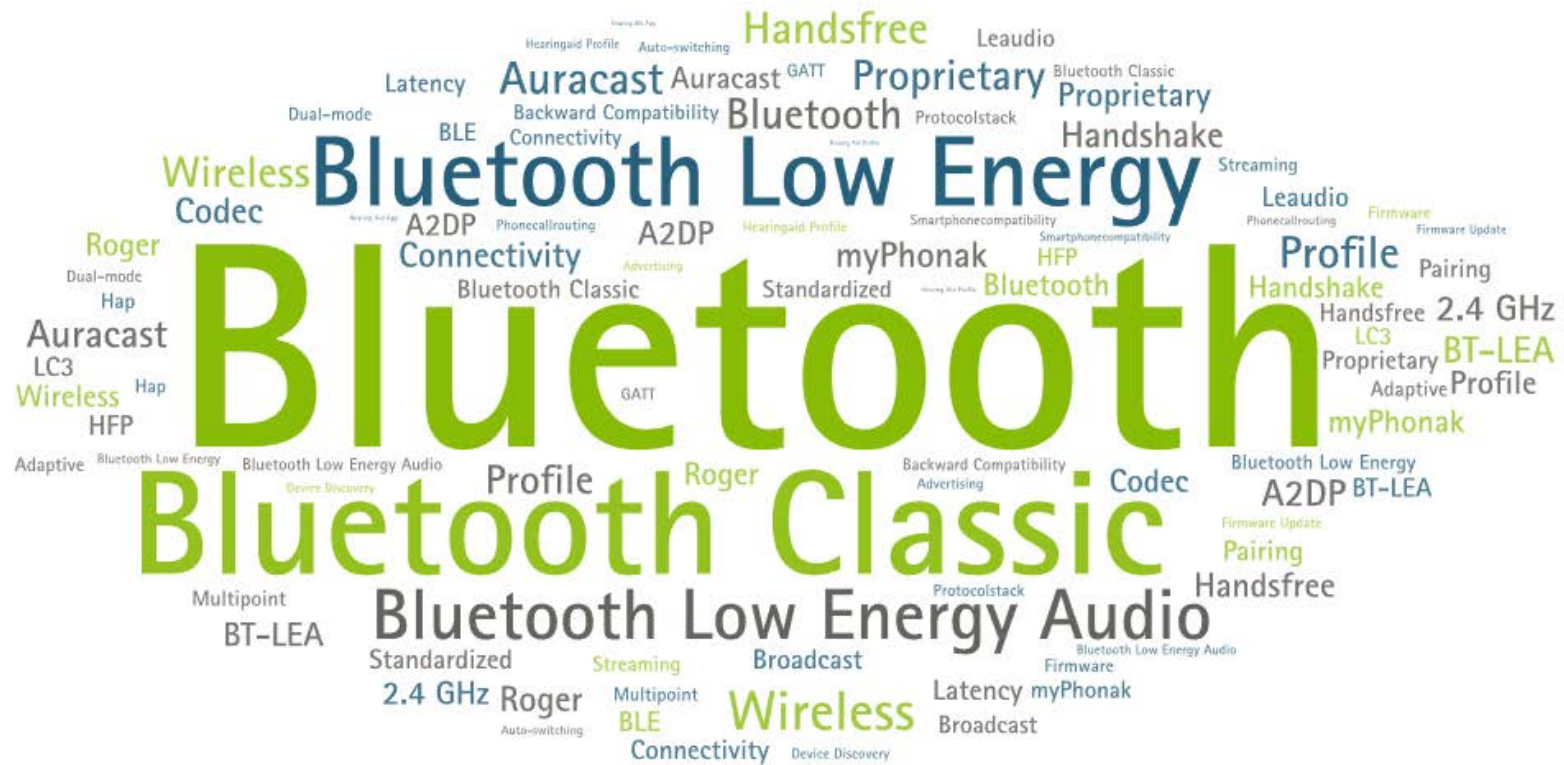
It works on a frequency (2.4 GHz) that is available worldwide.



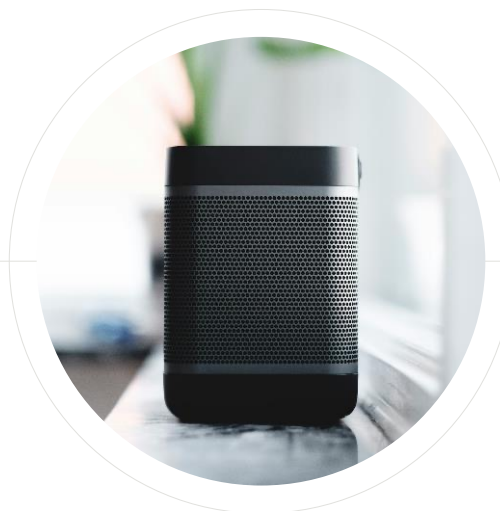
Bluetooth technology is not new to hearing aids



Android is a trademark of Google LLC.
The Auracast™ word mark and logos are trademarks owned by Bluetooth SIG, Inc.

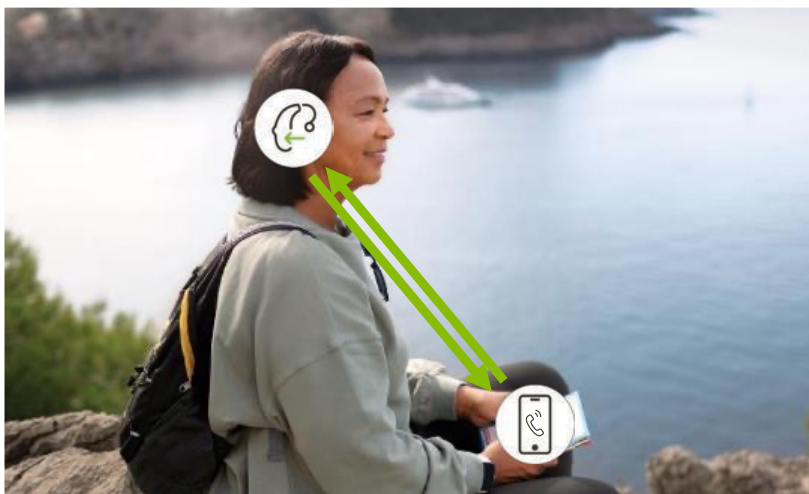


Bluetooth Classic Audio

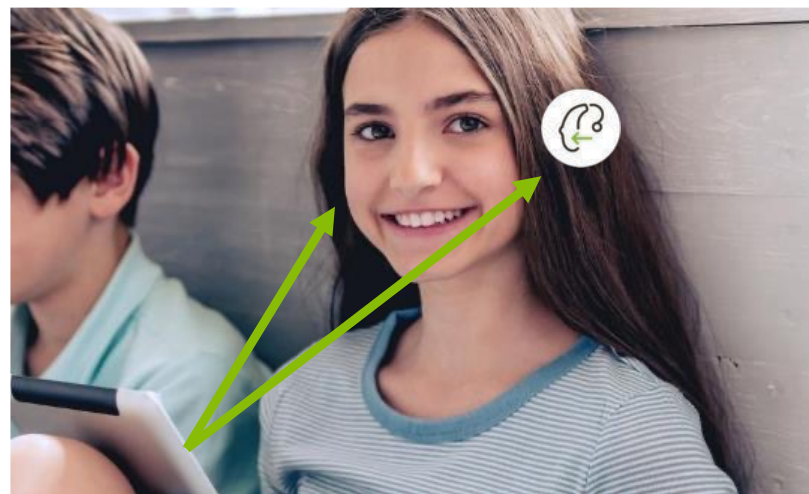


Bluetooth Classic Audio: Profiles

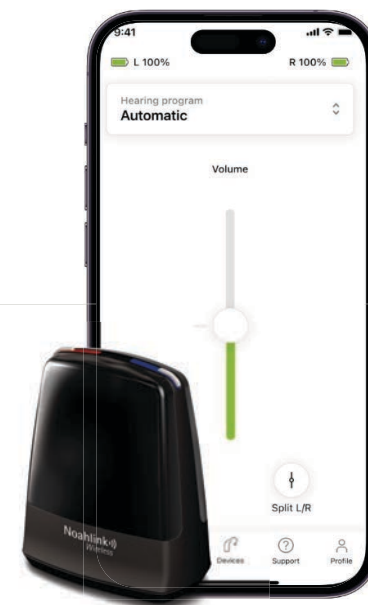
Hands-Free Profile (HFP)



Advanced Audio Distribution Profile (A2DP)



Bluetooth Low Energy



Bluetooth Low Energy (LE) Audio

- Adds audio transmission capabilities to Bluetooth Low Energy originally designed for non-audio use
- Provides better sound quality at the same power consumption or maintain sound quality while using less power¹
- Adds multi-stream audio; independent left/right ear connections
- Broadcast Audio (Auracast™) – enables public and shared audio streaming
- Currently has low market penetration and lack of maturity



¹⁴ Bluetooth SIG (2025)

Bluetooth protocols: Summary

Bluetooth Classic Audio

Key features:

- Designed for audio transmission
- Hands-free phone calls & high-quality audio streaming
- Broadly compatible and well developed

Bluetooth Low Energy

Key features:

- Designed for low power applications
- Sensors, fitness devices and remote controls and apps
- Offers independent ear pairing
- Doesn't need a continuous connection

Bluetooth Low Energy Audio

Key features:

- Adds audio capabilities to Bluetooth Low Energy
- Offers independent ear pairing and broadcast audio (Auracast™)
- Improved audio quality for phone calls and media streaming at same power of Bluetooth Classic Audio

What about Made for iPhone and
Audio Streaming for Hearing Aids
(ASHA)?



Proprietary protocols



Proprietary protocols are closed protocols developed and used by a specific manufacturer.



This contrasts with a standardized protocol like **Bluetooth**, which is open and compatible across different manufacturers.



Proprietary protocols limit compatibility, often restricting connections to brand-specific products.

Proprietary protocols

Proprietary protocols can be a good thing!

They can bridge gaps in standardized protocols, for example:

- Can offer better power efficiency
- Can step in for missing features, such as low latency or networking
- Can provide better user experience, or management methods
- Does this remind you of any proprietary protocols you know of?



Phonak proprietary protocols

Phonak's proprietary 2.4 GHz protocols:

- AirStream™
- Roger™

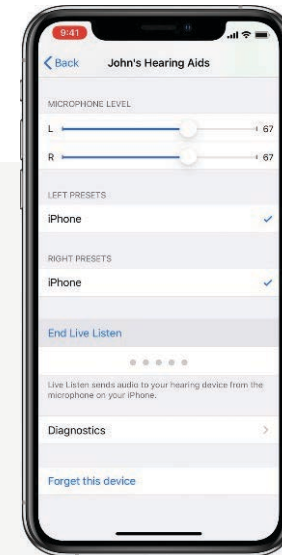
Both proprietary protocols enable functions not available in Bluetooth Classic Audio, such as:

- Lower latency
- Lower power consumption; and
- Easy connection and networking



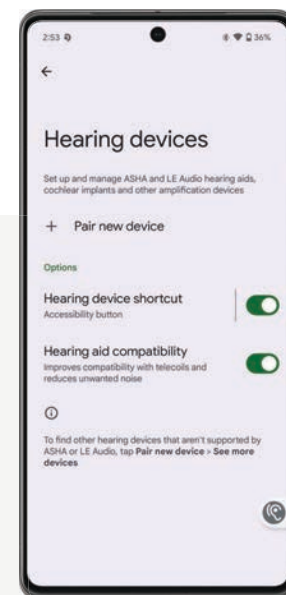
What is Made for iPhone (MFi)?

- **Apple's proprietary protocol** for direct audio streaming to hearing aids
- Apple extended the standardized Bluetooth Low Energy protocol to allow it to transmit audio (a Bluetooth LE extension)
- Limited to only Apple iPhones, iPads and select Mac computers



Audio Streaming for Hearing Aids (ASHA)

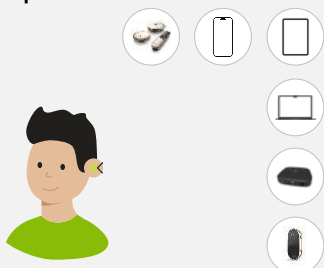
- Google's proprietary Bluetooth LE protocol extension for Android OS
- **Enables one-way audio streaming for:**
 - Phone calls
 - Media audio
- Only works with select Android phones and tablets and hearing aids that support the protocol
- Does not support any laptops (not even Google Chromebooks)



Not all connectivity is created equal!

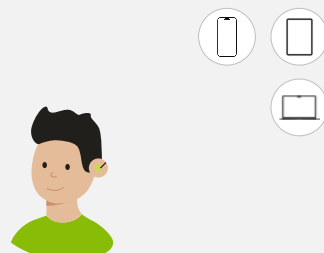
Phonak connectivity

- Broadest compatibility **today and in future**
- Hands-free calls and high-quality media streaming
- Also supports Roger and AirStream protocols



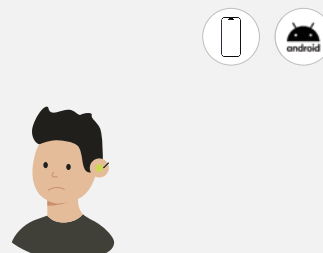
Bluetooth LE Audio

- The latest Bluetooth audio standard
- Low availability in products
- Can provide comparable audio quality at lower power consumption



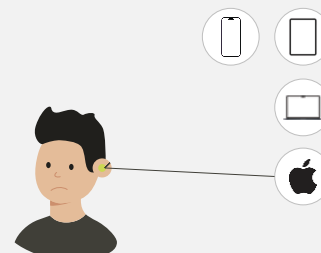
ASHA connectivity

- Android phones and tablets only
- No hands-free phone calls
- Future of ASHA is unknown



MFi connectivity

- iPhone, iPads and select Macbooks
- Future of MFi is unknown





Bluetooth pairing and connections

What is pairing?

- Bluetooth pairing is the **process of establishing a secure connection** between two devices
- Pairing does not mean the devices are actively connected – this is a separate process
- Paired devices can automatically reconnect when within range (with some exceptions)
- Like other Bluetooth devices, Phonak hearing aids use a simple and intuitive pairing procedure



Pairing for multiple uses

Bluetooth LE pairing
for myPhonak

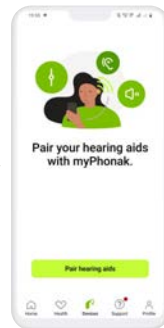


Bluetooth Classic pairing
for phone calls/streaming



New pairing process for Virto R Infinio

myPhonak 7.2
with
Virto R Infinio



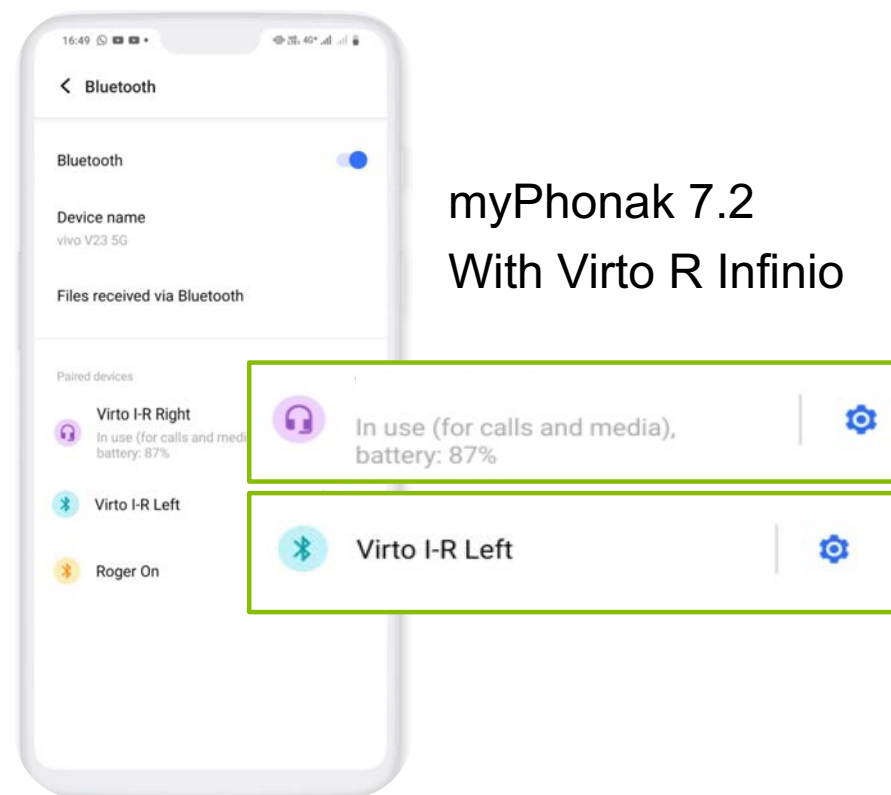
Pairing for
calls/streaming is
also complete

*smartphones and tablets

One-step pairing

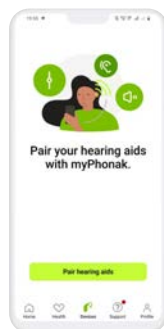


Visibility on the Bluetooth list



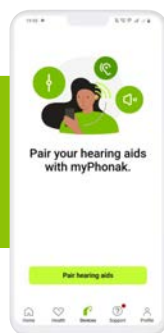
Pairing process for older models

myPhonak 7.2
with Virto R Infinio



Pairing for
calls/streaming is
also complete

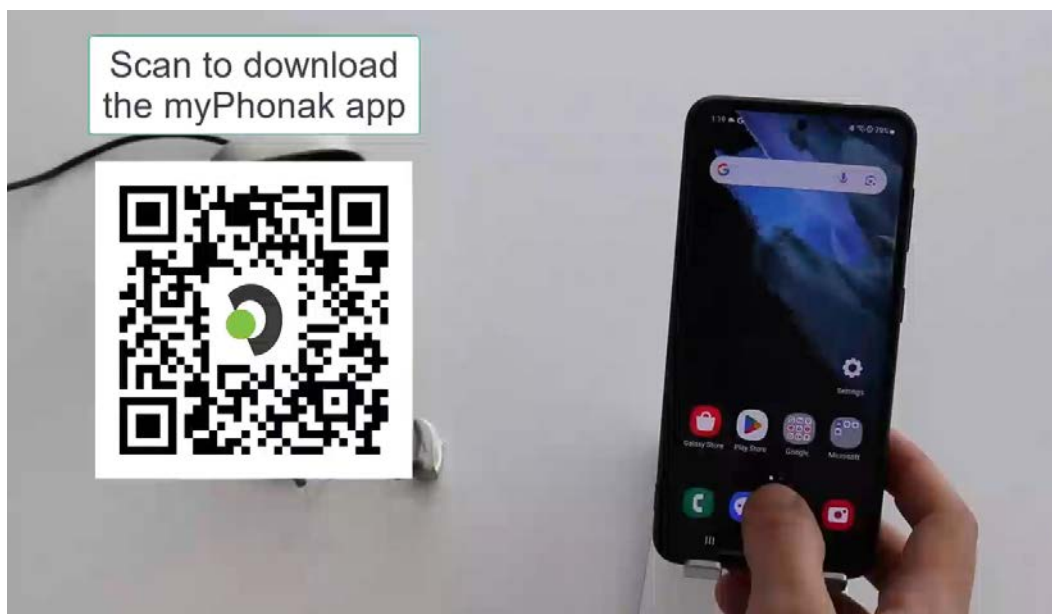
myPhonak 7.2
with everything
else



Still need to
complete pairing
in BT menu for
calls/streaming
(second step)

*smartphones and tablets

Pairing to myPhonak to control the hearing aids



1. Download and install the myPhonak app.
2. Open the app and restart the hearing aids to enable pairing mode.
3. Tap "Pair device" on the home screen and follow the prompts.
4. Wait for the hearing aid(s) to show up. Once both devices are found tap on them to pair.
5. Accept any pop-up pairing requests.

Pairing for phone calls & audio streaming



1. Open the phone's Bluetooth menu (often found in "Settings"). Make sure Bluetooth is on.
2. Turn the hearing aids off and on again.
3. One hearing will show in the Devices list. Tap on it to pair and accept any pop-up pairing requests from the phone.

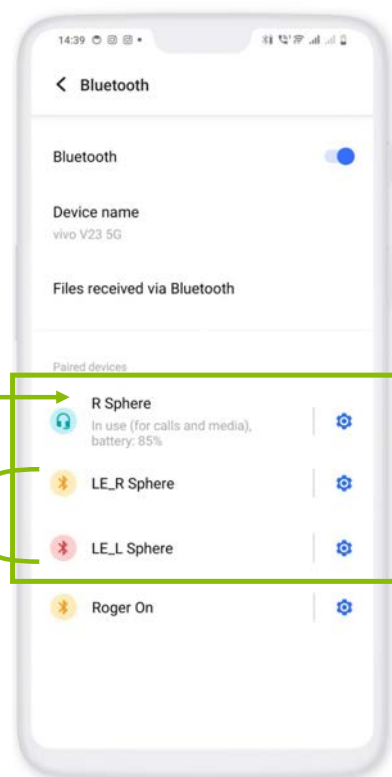
Note: Only **one pairing** is required for **phone calls & audio streaming**. For a binaural fitting, patients will hear audio in both aids and can answer using either button.

Visibility on the Bluetooth list

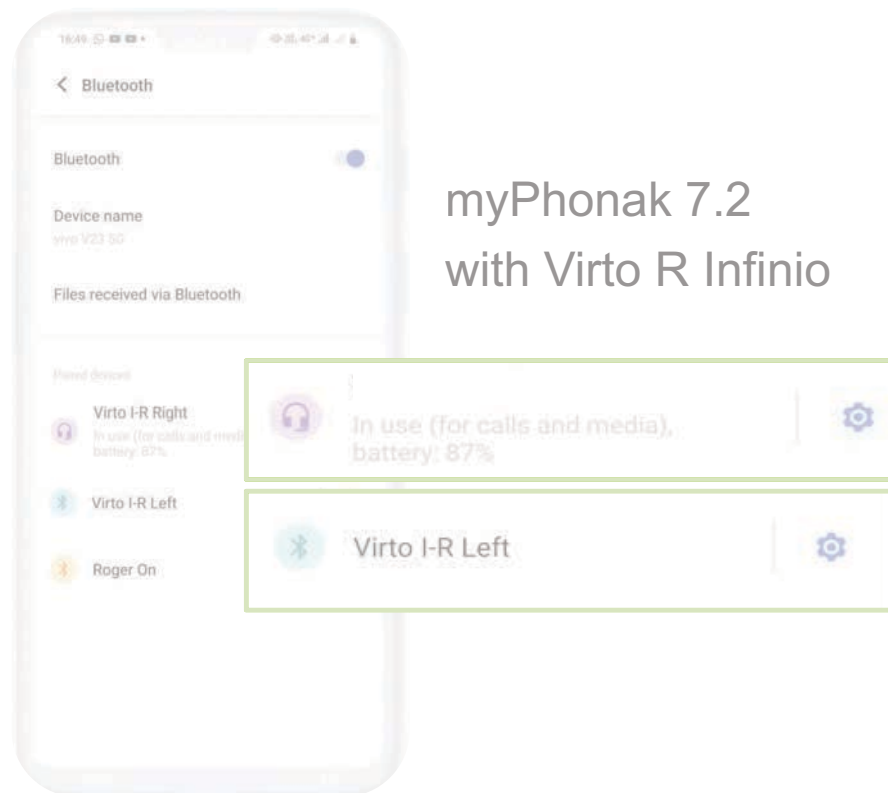
With earlier devices

Phone calls/
audio streaming

myPhonak app



myPhonak 7.2
with Virto R Infinio



Pairing multiple Bluetooth Classic Audio devices

Phonak hearing aids can pair a total of 8 Bluetooth Classic Audio devices, and support 2 active connections

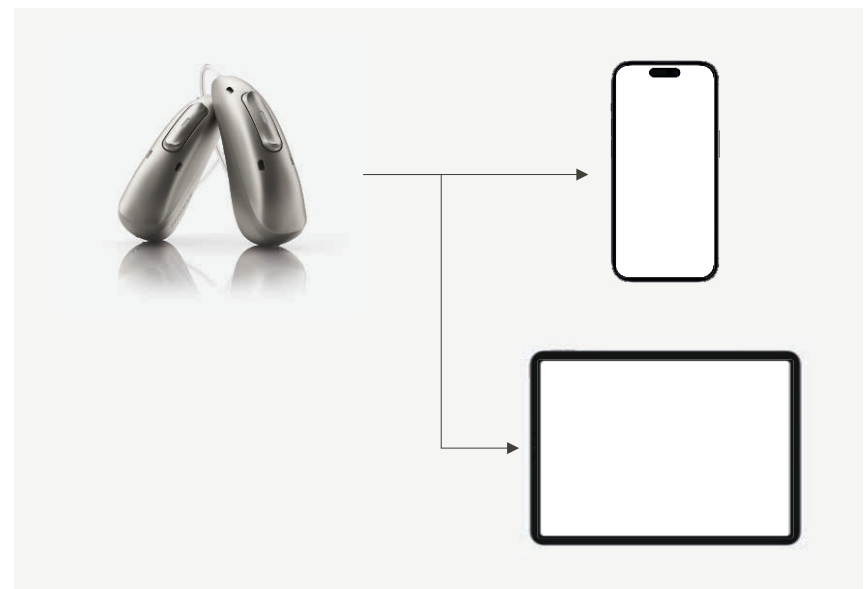
After pairing the first Bluetooth Classic Audio device, the second device is paired in the same way as the first

For additional pairings, deactivate BT on one or both previously paired devices in order to proceed



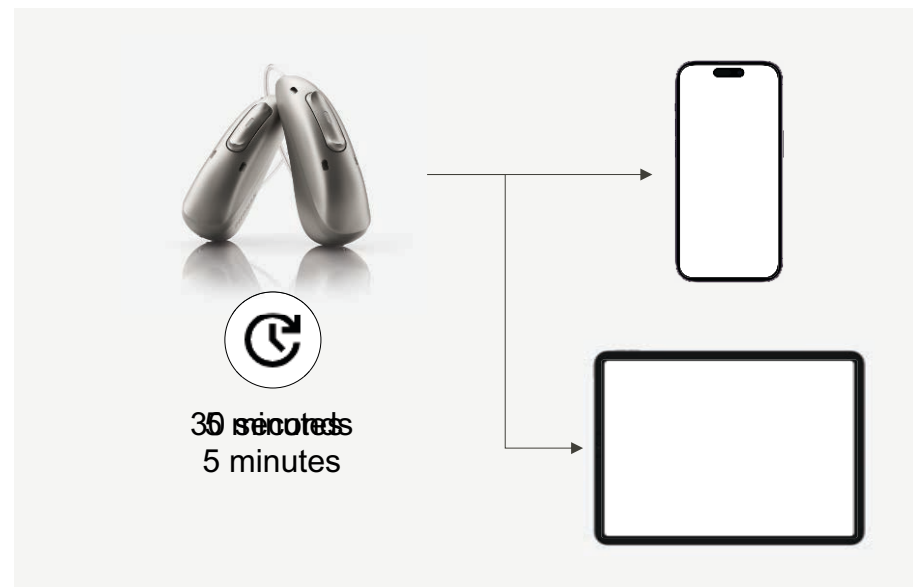
Reconnections: Multiple Bluetooth Classic Audio devices

- Phonak hearing aids search for the **4 most recently used devices** for automatic reconnection
- When the hearing aid holds fewer than 2 connections:
 - The hearing aid attempts to connect to any other recent devices **every 5 minutes**
 - Note: Pressing the multifunction button on the hearing aid will also initiate a reconnection search



Reconnections: Out-of-range

- If a connection is lost due to a Bluetooth device going out-of-range:
 - Phonak hearing aids attempt to reconnect every 30 seconds for 5 minutes
 - If unsuccessful, the hearing aids then search for devices every 5 minutes



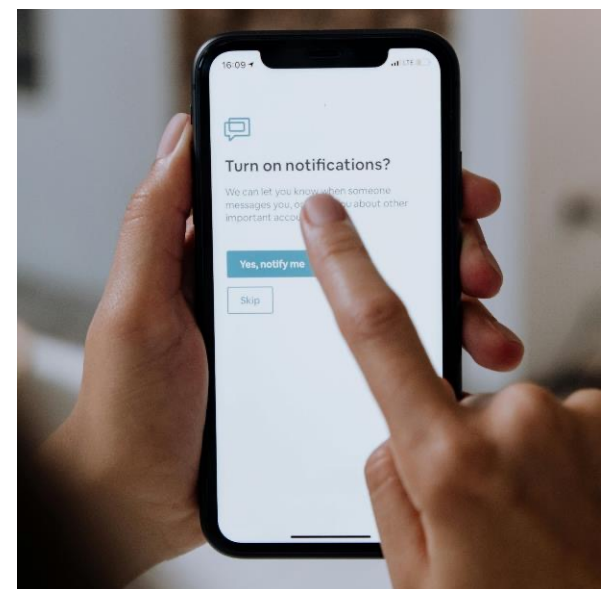
Tips for success: Notification & system sounds

Sounds generated by a smartphone, PC or other smart device.

They indicate a user has received a prompt from their phone or app.

Notification and system sounds are treated as media signals, like music or audio from a video.

- They are streamed using the A2DP profile
- They activate the AutoSense OS streaming program



Managing sounds: iPhone

If the user prefers not to hear notification or system sounds:

Engaging the external mute switch will stop all notification and system sounds (apart from ringtone).

Some apps provide control over notifications via app settings; this varies from app to app.

System sounds can be disabled via Sounds and Haptics settings menu

- Keyboard feedback
- Lock Sound
- System Haptics



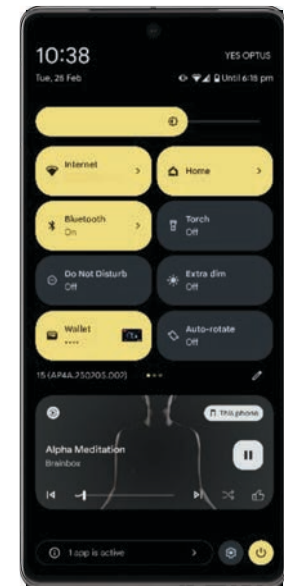
Android OS: Important to understand

Android OS is an operating system developed by Google for phones and tablets.

This may impact where to find and manage certain settings.

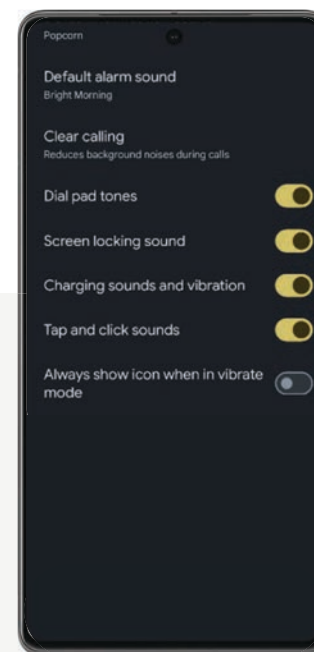
Unlike iOS, Android can look very different from device to device:

- How a button or menu looks
- Where a button or setting is located
- What a feature is called



Managing system sounds: Android OS

- System sounds can be disabled via the Sound and Vibration menu, located via device Settings.
- Sounds that can be disabled should include:
 - Dial pad tones
 - Screen locking sounds
 - Charging sounds and vibration
 - Tap and click sounds



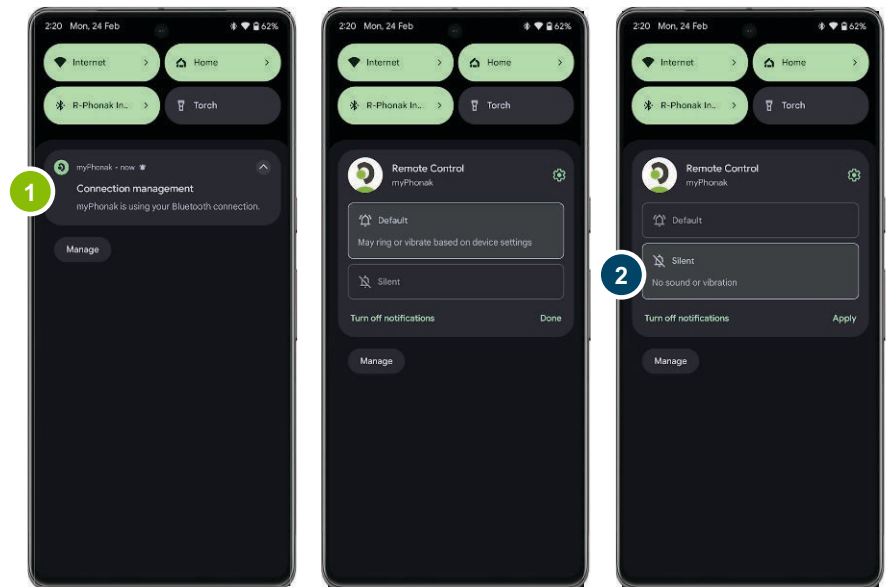
Managing notification sounds: Android OS

Notifications can also be managed on an app-by-app basis

- Notifications
- Ring tone
- Voice from phone calls and media sound is unaffected

After a notification occurs:

- **Step 1**
Press and hold
- **Step 2**
Select Silent



Voice Isolation and Clear Calling and others

These features enhance quality and reduce noise on the **user's voice** during calls.

Video meeting apps on PCs also include noise reduction features (e.g., Microsoft Teams, Zoom etc.).

Please note

- **iPhones:** Voice Isolation must be activated separately for each calling method.
- **Android:** Clear Calling is **not** enabled by default and only available on Google Pixel phones.



Tips for success: Phone calls

- Remember, using Bluetooth to stream calls provides important clinical benefits to users:
 - Enhanced speech audibility,³ word recognition,⁴ and call clarity⁵
 - Greater ease, comfort, and speech understanding⁶
 - Improved perception of emotion and intent¹⁷
- Optimizing Bluetooth call streaming is key to maximizing user benefits and satisfaction
- Phonak hearing aids offer leading call compatibility across phones, tablets and PCs

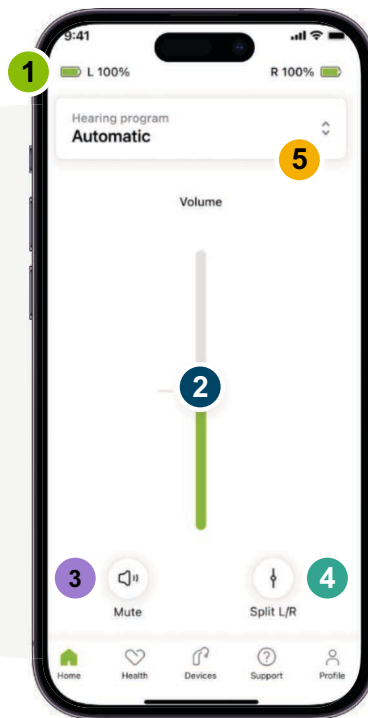


³ Burrows (2010), ⁴ Kim et al. (2014), ⁵ Najeeb et al. (2022), ⁶ Picou & Ricketts (2013), ¹⁷ Smith et al. (2014)



myPhonak: A brief overview

Basic functions



1 Battery level

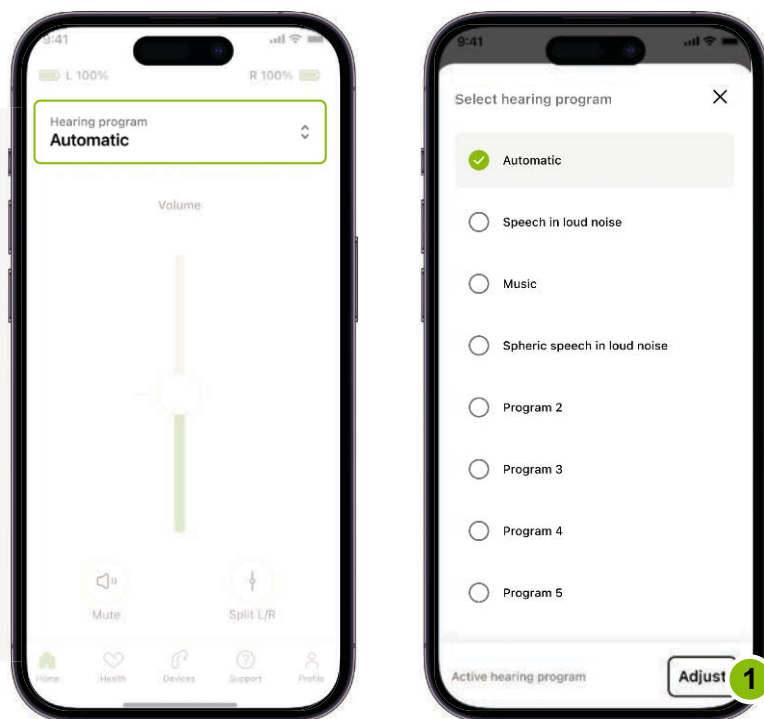
2 Volume control

3 Mute

4 Side independent volume

5 Program menu
Note: Streaming programs
automatically populate when a signal
is present

Advanced remote control



1 Advanced remote control

Advanced remote control



1 Volume

2 Speech Focus Microphone directionality range depends on tech level and base program/situation

3 Equalizer presets • Adjust pitch mix using presets or customize

4 Noise reduction

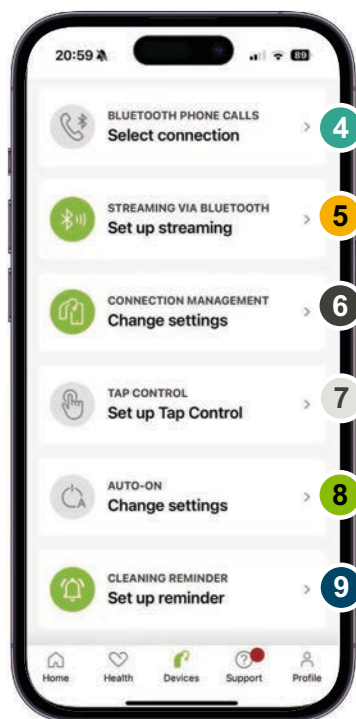
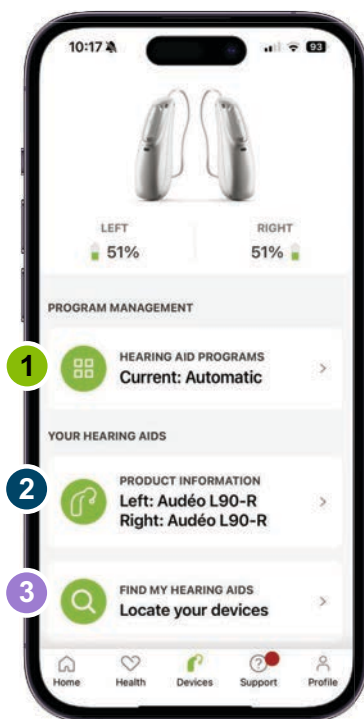
- NoiseBlock
- Dynamic Noise Cancellation
- Spheric Speech Clarity

5 Dynamics

- Decrease loud = G80 reduced
- Increase soft = G50 raised

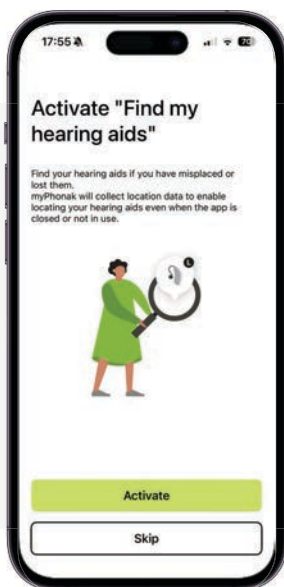
6 Save new preset

Devices

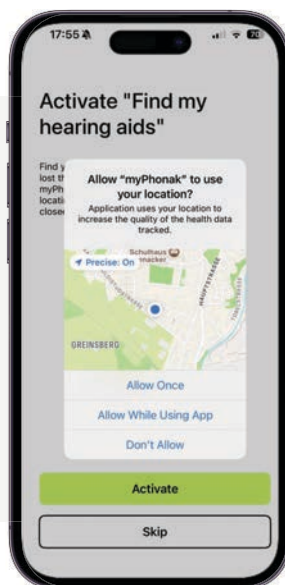


- 1 Hearing aid programs
Program management
- 2 Product information
Device SN & firmware version
- 3 Find my hearing aids
Locate devices
- 4 Bluetooth phone calls
Change Bluetooth call bandwidth
- 5 Streaming via Bluetooth
Instructions for
Bluetooth Classic Audio pairing
- 6 Connection Management
Stay connected
- 7 Tap Control
Configure functions
and sensitivity
- 8 Auto-On
- 9 Cleaning reminder

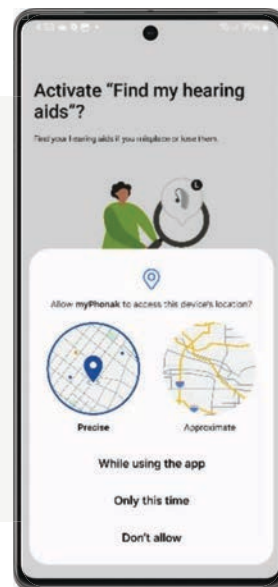
Find my hearing aids



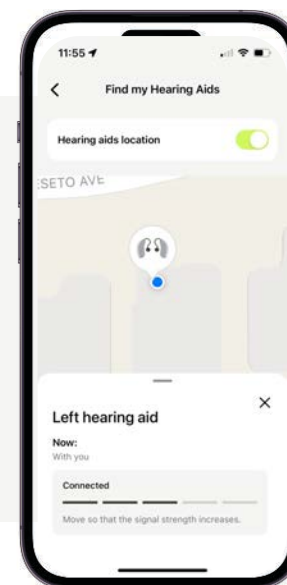
iPhone/Android



iPhone



Android





Bluetooth Troubleshooting

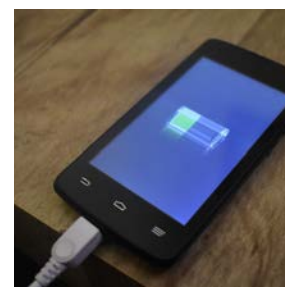
Tip for success: Set expectations and discuss limitations



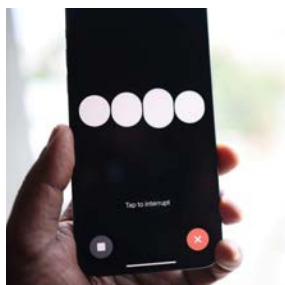
Interference
& Dropouts



Range
limitations
with barriers



Battery
Drain



Inevitable
intermittency



Streaming
Device
Limitations



Device and
app updates

Tip for success: Ask the right questions





Tip for success: The reset and restart

1

Close and reload
the affected app
(e.g., Spotify,
YouTube etc.)

2

Turn Bluetooth
off for 10 seconds
and then it turn
back on

3

Restart the
hearing aids

4

Restart the
phone or
Bluetooth device

- Anyone can complete these steps – no appointment required
- Should any of these not resolve the issue, consider a “**re-pair**”

Bluetooth troubleshooting: Re-pair

1

Forget/unpair all Phonak related pairings from the Bluetooth menu

2

Uninstall myPhonak (if the user has installed it on the device)

3

Restart the Bluetooth device

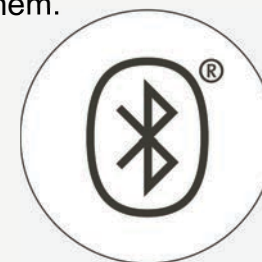
4

Complete Bluetooth Classic Audio pairing process on the user's devices

5

Reinstall the myPhonak app and re-pair Bluetooth Low Energy pairings (if required).

“Re-pair” refers to clearing all Phonak Bluetooth pairings on a device and re-pairing them.



“Re-pair”

Bluetooth troubleshooting: Re-pair by HCP

1

Forget/unpair all Phonak related pairings from the Bluetooth menu

2

Uninstall myPhonak (if the user has installed it on the device)

3

Restart the Bluetooth device

4

Connect hearing aids to Phonak Target

5

Under Bluetooth in "Device Options", select the checkbox labelled "Delete pairings". Please note: this will clear ALL pairings

6

Save and close Phonak Target

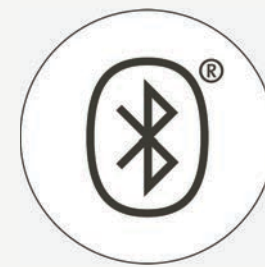
7

Complete Bluetooth Classic Audio pairing process on the user's devices

8

If required, reinstall the myPhonak app and re-pair Bluetooth Low Energy pairings

"Re-pair" refers to clearing all Phonak Bluetooth pairings on a device and re-pairing them.



"Re-pair"

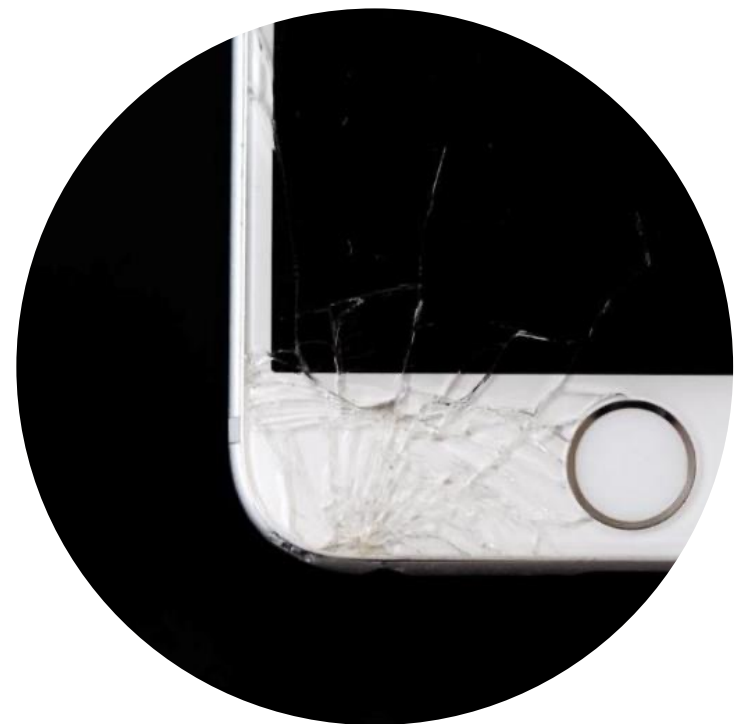
Tips for success: Optimize phone location

- **Phone placement can affect Bluetooth signal quality:**
 - On body location or head shadow
 - Handbags or backpacks
 - Thick and/or wallet-style phone cases
 - Second phones
- **Solutions:**
 - Optimal connectivity is achieved with a clear line of sight
 - Remove obstructions to see if connection improves



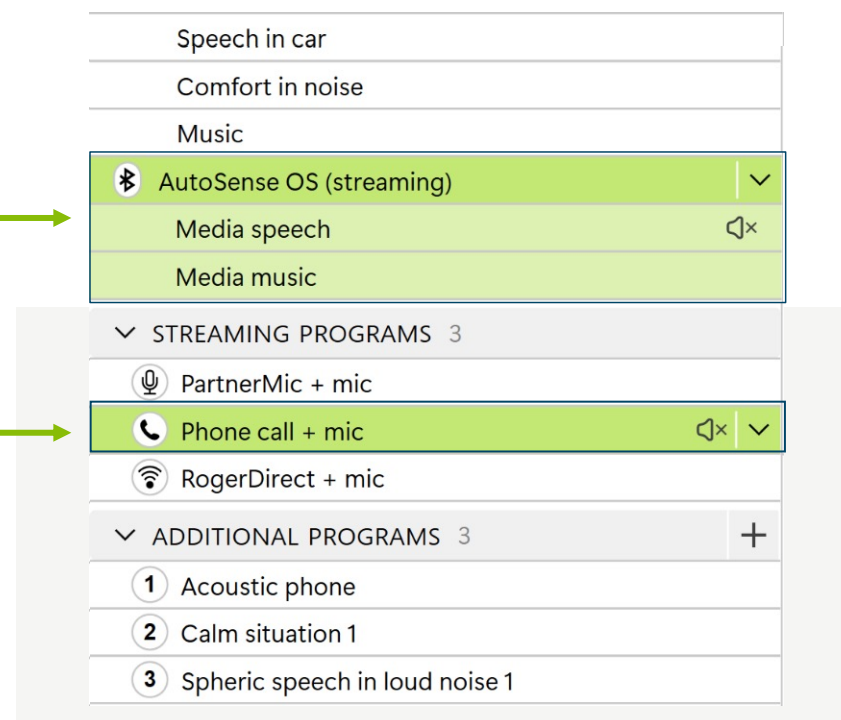
Tips for success: Overcoming dropouts, distortion or poor reliability

- Physical damage to a user's devices or hearing aids can affect Bluetooth performance
 - Physically inspect the user's hearing aids, device(s) and accessories
 - Test Bluetooth performance swapping devices with reliable alternatives
 - Consider hearing aid re-pair or replacement only if damage is confirmed
- Inappropriate programming can also cause sound quality issues
 - Review and adjust AutoSense OS Streaming programs or Phone call + Mic program settings



Phone and video calls: Tuning sound quality

- AutoSense OS (streaming) programs are dedicated programs for incoming A2DP signals
- The “Phone call + mic” program is a dedicated program for incoming Hands-free Profile (HFP) signals



Phone and video calls: Audio routing on iOS devices



Key points: Bluetooth troubleshooting

- Set **realistic expectations** early on
- **Ask the right questions** to identify the problem
- Basic Troubleshooting Steps: **Reset, Restart and Re-pair**
- Consider more advanced factors if problems persist
- Improve voice quality during calls **using phone features**, counseling and coaching
- Don't let notifications be annoying – **empower the user** to manage them
- Send hearing aids for repair only as a last resort



**Phonak Connectivity –
empowering users,
supporting clinicians,
and strengthening your
practice**





Together, we
change lives.

Full references

1. Picou, E. M. (2020). MarkeTrak (M10) survey results demonstrate high satisfaction with and benefits from hearing aids. *Seminars in Hearing*, 41(1), 21-26. <https://doi.org/10.1055/s-0040-1701243>
2. Frazier, S. O., Bailey, A., Cadwell, B., Clifford, C., Liebe, K., Myers, D., & Sterkens, J. (2024). *Consumer use of and preferences for assistive communication technology in public places*. Center for Communication Access in America. <https://centerforhearingaccess.org/wp-content/uploads/Frazier-et-al-Consumer-use-of-and-preferences-for-assistive-communication-technology-in-public-places1-8-24.pdf>
3. Burrows, D. L. (2010). Bluetooth technology in hearing aids: a clinician's perspective. *Perspectives in Audiology*, 6(1), 4-8. <https://doi.org/10.1044/poa6.1.4>
4. Kim, M. B., Chung, W. H., Choi, J., Hong S. H., Cho, Y. S., Park, G., & Lee, S. (2014). Effect of a Bluetooth-implemented hearing aid on speech recognition performance: subjective and objective measurement. *Annals of Otology, Rhinology and Laryngology*, 123(6), 395-401. <https://doi.org/10.1177/0003489414526847>
5. Najeeb, S. M. T., Singh, A., Chandel, S., Parveen, M., & Gupta, N. (2022). Study on use of Bluetooth technology in hearing aids among adults. *Current Journal of Applied Science and Technology*, 41(57), 1-7. <https://doi.org/10.9734/cjast/2022/v41i474024>
6. Picou, E. M., & Ricketts, T. A. (2013). Efficacy of hearing-aid based telephone strategies for listeners with moderate-to-severe hearing loss. *Journal of the American Academy of Audiology*, 24(1), 59-70. <https://doi.org/10.3766/jaaa.24.1.7>
7. Maidment, D. W., & Amlani, A. M. (2020). Argumentum ad ignorantium: smartphone-connected listening devices. *Seminars in Hearing*, 41(4), 254-265. <https://doi.org/10.1055/s-0040-1718711>
8. Barrera, S., Kalil, G., Mckee, E., Paul, O., Grillis, A., & Carron, J. (2023). Direct Bluetooth connectivity results in better hearing aid compliance in children. *International Journal of Pediatric Otorhinolaryngology*, 175, 111745. <https://doi.org/10.1016/j.ijporl.2023.111745>
9. Shetty, H. N., Kumar, S. D., & Vijayasarathy, S. (2023). Bluetooth coupling in hearing aids: effect on audiovisual speech recognition and quality rating of compressed speech in older individuals with sloping hearing loss. *International Archives of Otorhinolaryngology*, 27(2), e302-308. <https://doi.org/10.1055/s-0042-1744170>
10. Murdin, L., Sladen, M., Williams, H., Bamiou, D. E., Bibas, A., Kikidis, D., Oikonomou, A., Kouris, I., Koutsouris, D., & Pontopipidan, N. H. (2022). eHealth and its role in supporting audiological rehabilitation: patient perspectives on barriers and facilitators of using a personal hearing support system with mobile application as part of the EVOTION study. *Frontiers in Public Health*, 14(9), 669727. <https://doi.org/10.3389/fpubh.2021.669727>

Full references

11. Ng, S. L., Phelan, S., Leonard, M., & Galster, G. (2017). A qualitative case study of smartphone-connected hearing aids: Influences on patients, clinicians, and patient-clinician interactions. *Journal of the American Academy of Audiology*, 28(6), 506-521. <https://doi.org/10.3766/jaaa.15153>
12. McDermott-Wells, P. (2005). What is Bluetooth? *IEEE Potentials*, 23(5), 33-35. <https://doi.org/10.1109/MP.2005.1368913>
13. Hunn, N. (2024). *Bluetooth® LE Audio (2nd edition, including Auracast™)*. Bluetooth. <https://www.bluetooth.com/wp-content/uploads/2025/01/Introduction-to-LE-Audio-2.0.pdf>
14. Bluetooth SIG. (2025, November 2). *A technical overview of LC3*. <https://www.bluetooth.com/blog/a-technical-overview-of-lc3/>
15. Zhou, J., Zhou, H., Hu, C., & Hu, S. (2013). Moisture vs. properties of MDF. *BioResources*, 8(3), 4185-4192.
16. Fels, L. (2017, May 16). *Directional microphones: are we going in the right direction?* Phonak. <https://audiologyblog.phonakpro.com/directional-microphones-effects-of-microphone-orientation/>
17. Smith, P., & Davis, A. (2014). The benefits of using Bluetooth accessories with hearing aids. *International Journal of Audiology*, 53(10), 770-773. <https://doi.org/10.3109/14992027.2024.941075>