

Bluetooth A-Z

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PHONAK
life is on

Bluetooth A-Z.

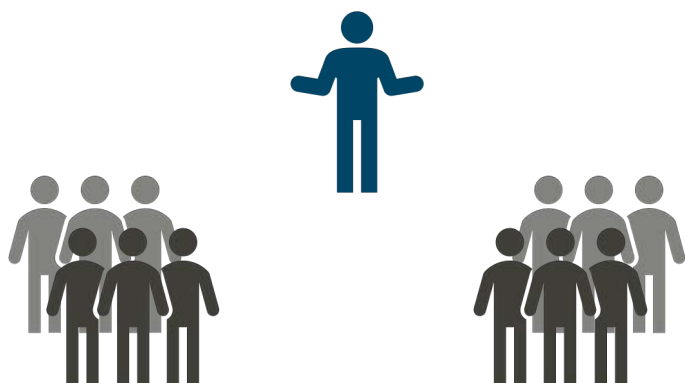
A practical guide to Bluetooth from foundations to use to troubleshooting.

Learner objectives

After this course, participants will be able to :

- List the Bluetooth protocols used by Phonak technology
- Explain the pairing process between hearing aids and Bluetooth devices
- Describe how to troubleshoot common challenges with Bluetooth hearing aid connections

Let's go back...way back



c. 900s



Let's go back...way back



c. 900s



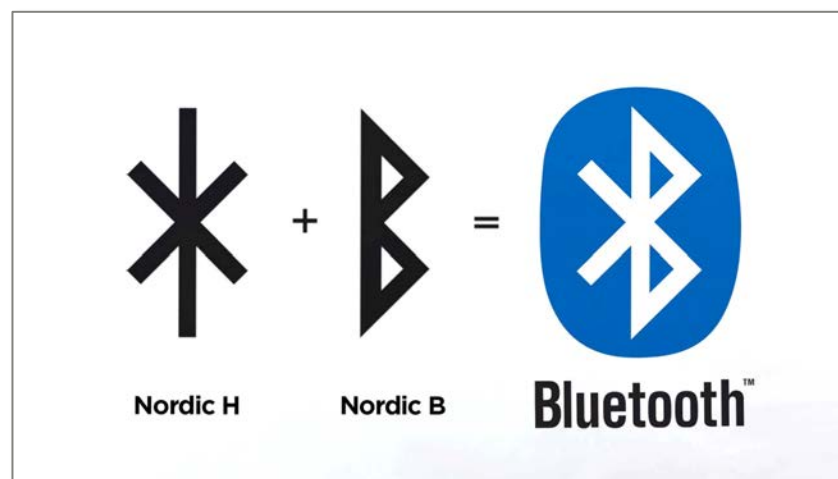
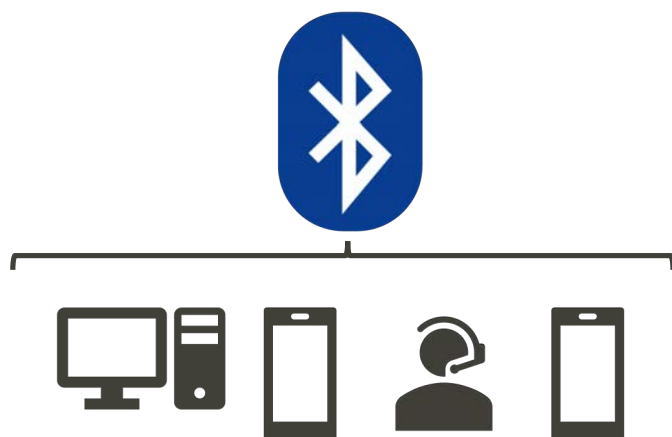
A similar problem in recent days



1997



A similar problem in recent days



1997

A huge success



First Bluetooth
solution

1997



2 Billion

devices sold
annually



**Audio
Streaming**



10 Billion

devices globally

Bluetooth connectivity enters the hearing aid space



Body worn
accessories

2006



First MFi
hearing aids

2014



First MFA
hearing aids

2017



First ASHA
hearing aids

2019



First hearing
aids 2 active
connections

2020



Bluetooth basics



Phone calls &
streaming



myPhonak app



Staying connected



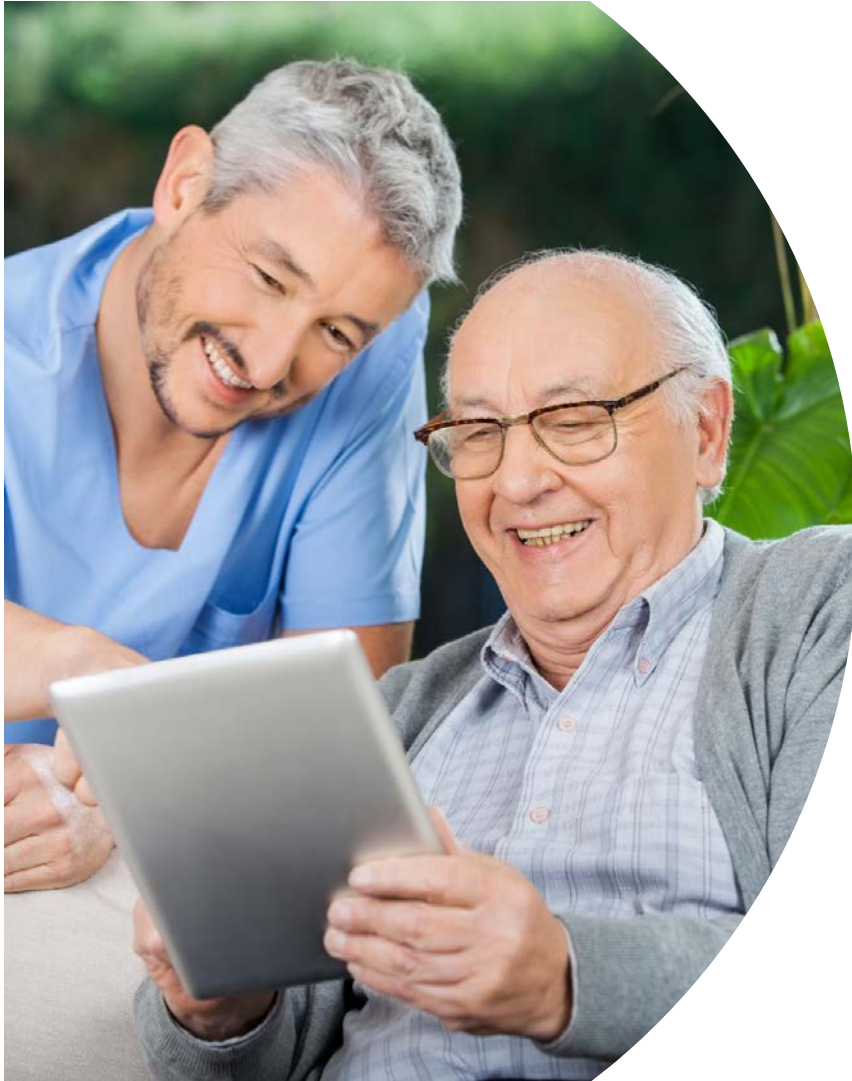
When the
unexpected happens



Resources & support

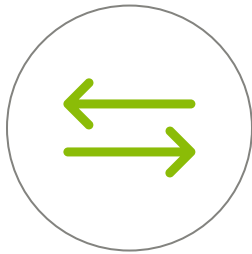


Bonus fun



Bluetooth basics

What is Bluetooth?



Exchange
of audio
and data



2.4 GHz
radio band



Paired
connections



Frequency
hopping

Voice vs. language

2.4 GHz

Bluetooth

Classic

- Advanced Audio Distribution Profile (A2DP)
- Hands Free Profile (HFP)

Low Energy (LE) Data

LE Made for iOS (MFi)

LE Audio Streaming for
(Android) Hearing Aids (ASHA)

LE Audio

Proprietary

Roger

AirStream

Binaural VoiceStream
Technology

What source devices are compatible?

ASHA

Specific Pixel,
Galaxy, and OnePlus
phones

MFi

iPhones, iPads

MFA

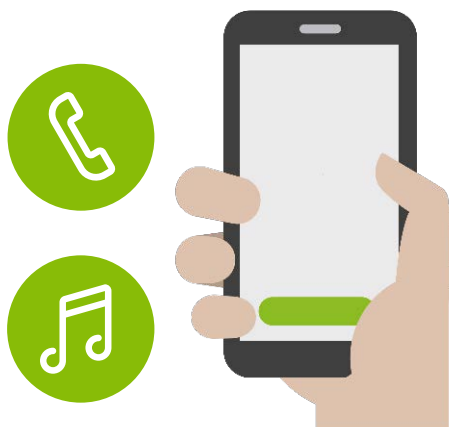
Flip phones,
iPhones, Android
phones, iPads,
tablets

Laptops, computers,
smart TVs

Separate Bluetooth® pairings support different functions

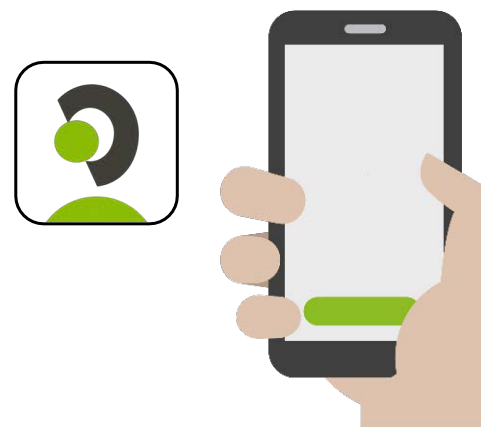
Phone calls & Audio streaming

Bluetooth® Classic
(HFP & A2DP)

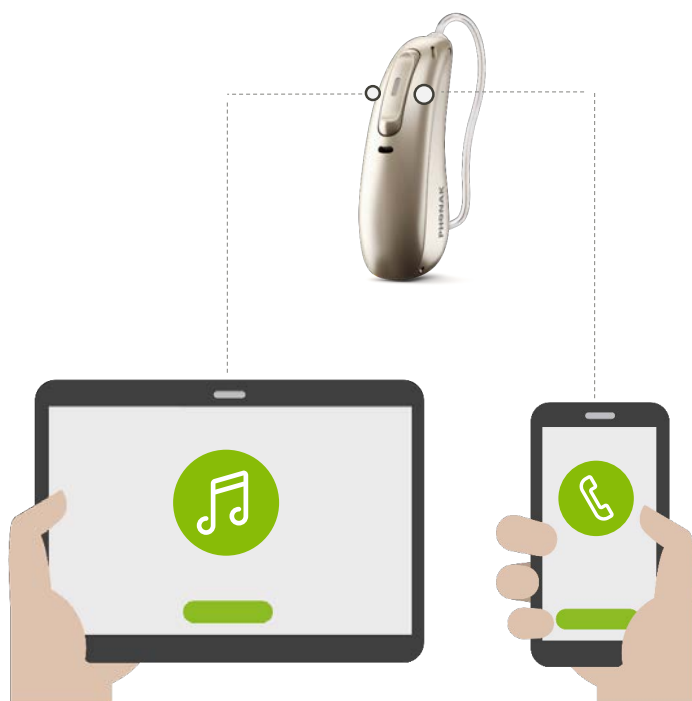


myPhonak app

Bluetooth® Low Energy
(LE)



Two active connections make life easier!



Mix & Match combinations of:

- iPhones
- Android phones
- Flip phones
- Tablets
- Computers
- Smart TVs

Phonak hearing aids support which Bluetooth protocols?

- A. Headset profile (HSP), A2DP, MFi
- B. ASHA, MFi, LE
- C. Handsfree profile (HFP), A2DP, LE
- D. AirStream, BVST, ASHA



**Knowledge
check**



Bluetooth Classic
for phone calls and
audio streaming

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.

Why does BT Side matter?



Defines which side used for own voice pickup during calls

(R) BLUETOOTH NAME R-Phonak hearing aid	BLUETOOTH SIDE (R) Right ▼	(L) BLUETOOTH NAME L-Phonak hearing aid
BLUETOOTH PHONE ⓘ		
☐ Fixed bandwidth		
☒ Adaptive bandwidth		



Phone settings to turn off—Apple

System sounds

Settings→Sounds and Haptics



Turn off:

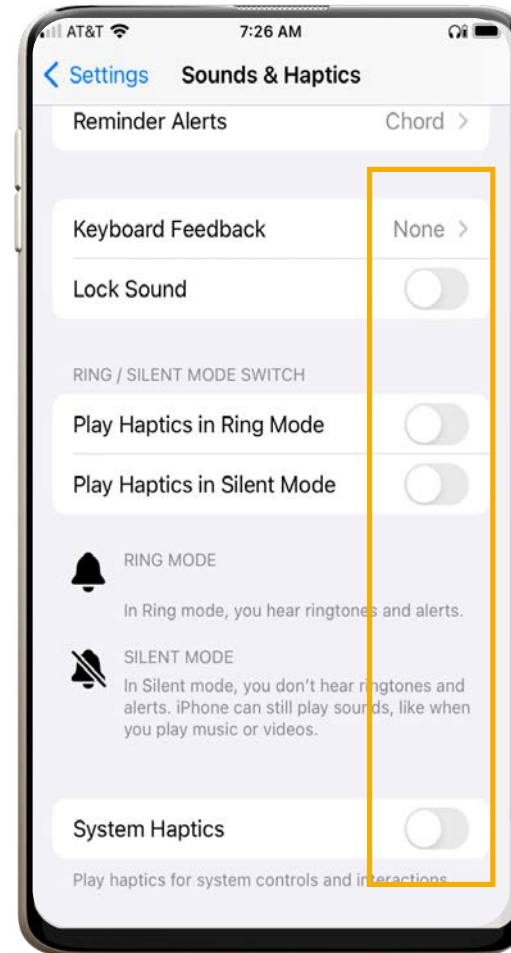
- Keyboard sounds
- Lock Sounds
- Haptics & System Haptics

Raise to Wake

Settings→Display and Brightness

Turn off :

- Raise to Wake

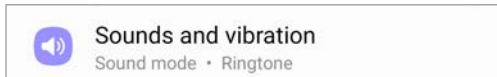




Phone settings to turn off—Android

System sounds

Settings→Sounds→System Sound



Turn off:

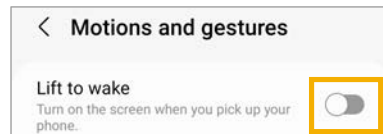
- Touch interactions
- Keyboard sounds
- Screen Lock Sounds

Lift to Wake

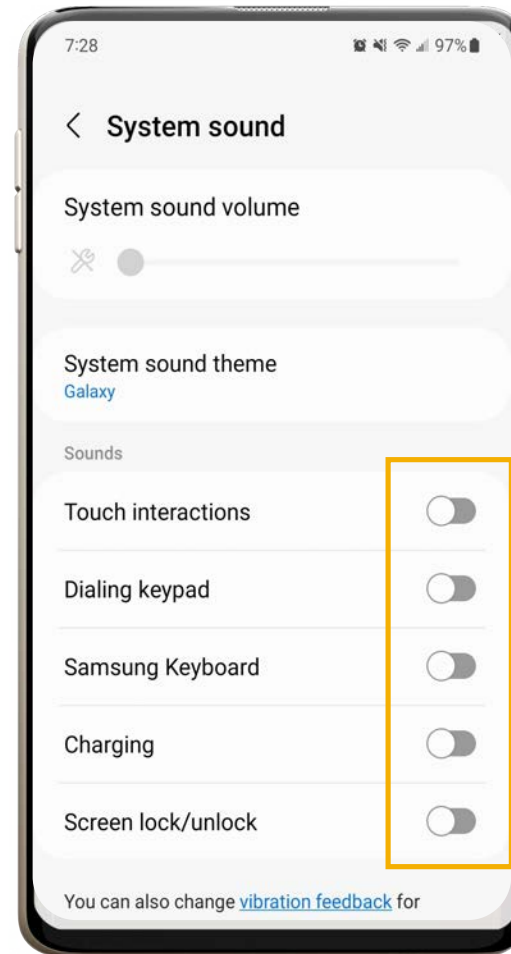
Settings→Advanced Features→Motions & Gestures

Turn off :

- Lift to Wake



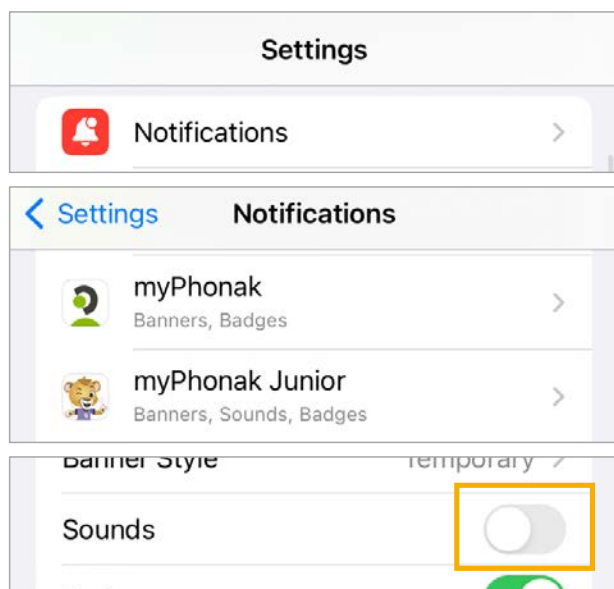
For Google: Settings→System→Gestures→Lift to check phone



Optional-Notifications

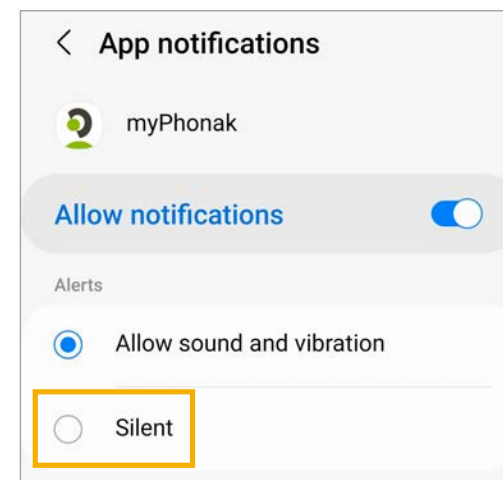
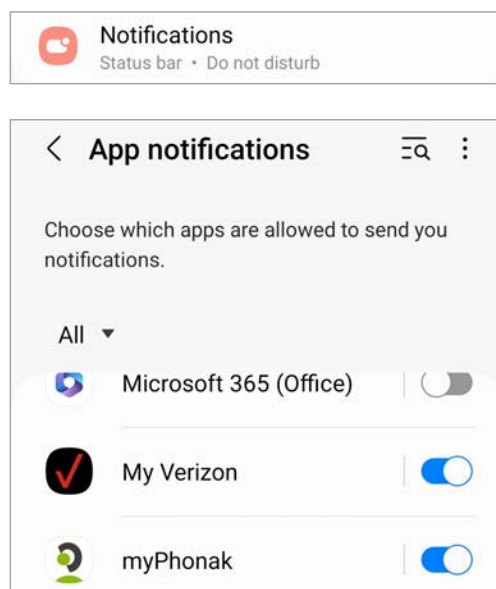
For Apple:

Settings > Notifications > Go into each app > Sounds



For Android:

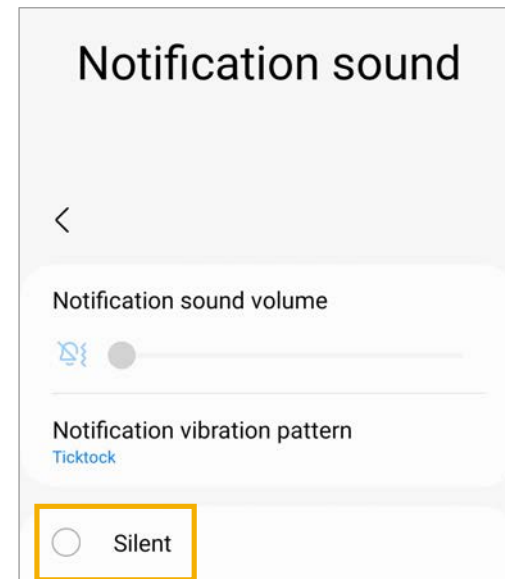
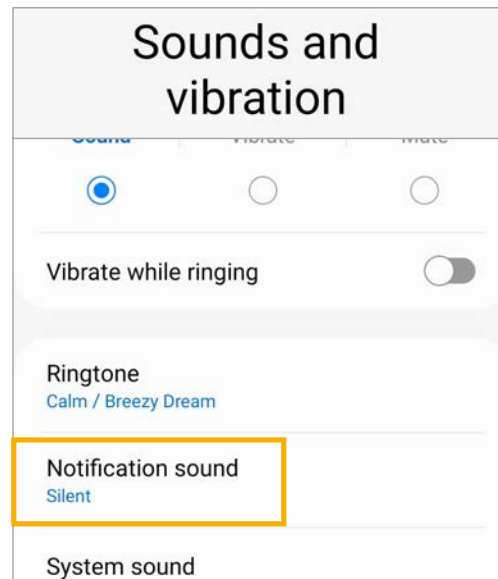
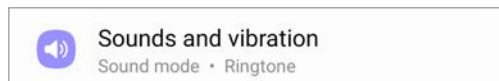
Settings > Notifications > App notifications > adjust for each app



Optional-Notifications

For Android to turn off ALL notifications:

Settings > Sounds and vibration > Notification sound > change to Silent



Once the aids are paired for phone calls/streaming both phone calls and notification sounds will be heard through the aids.



**Knowledge
check**

A. True

B. False



Bluetooth LE for
user control

myPhonak System requirements

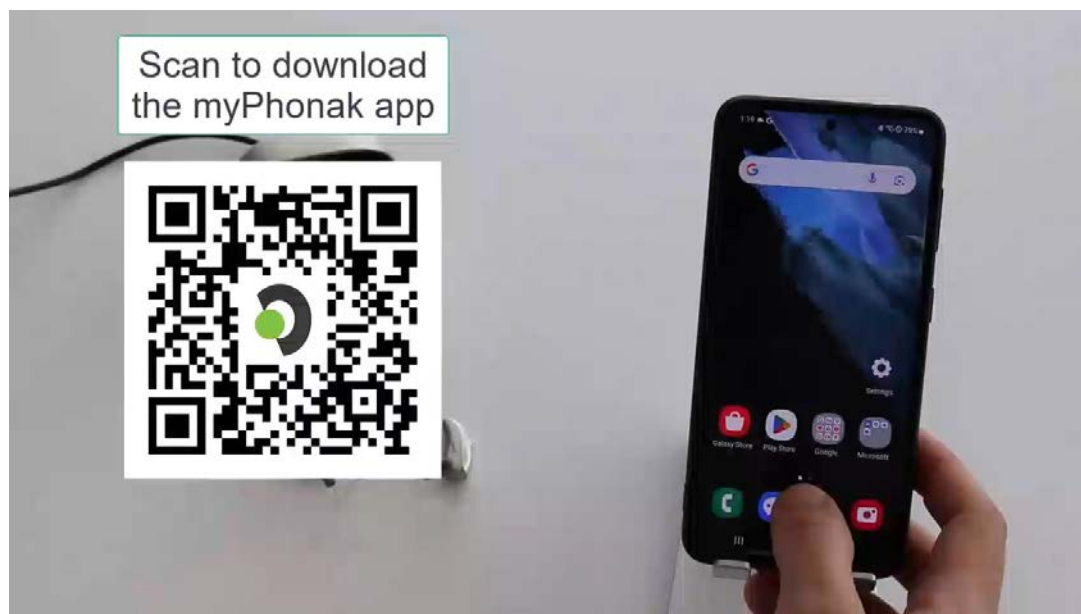
Bluetooth: version 4.2 or newer

Apple: iOS version 15.0

Android: OS version 8.0



Pairing to myPhonak to control the hearing aids



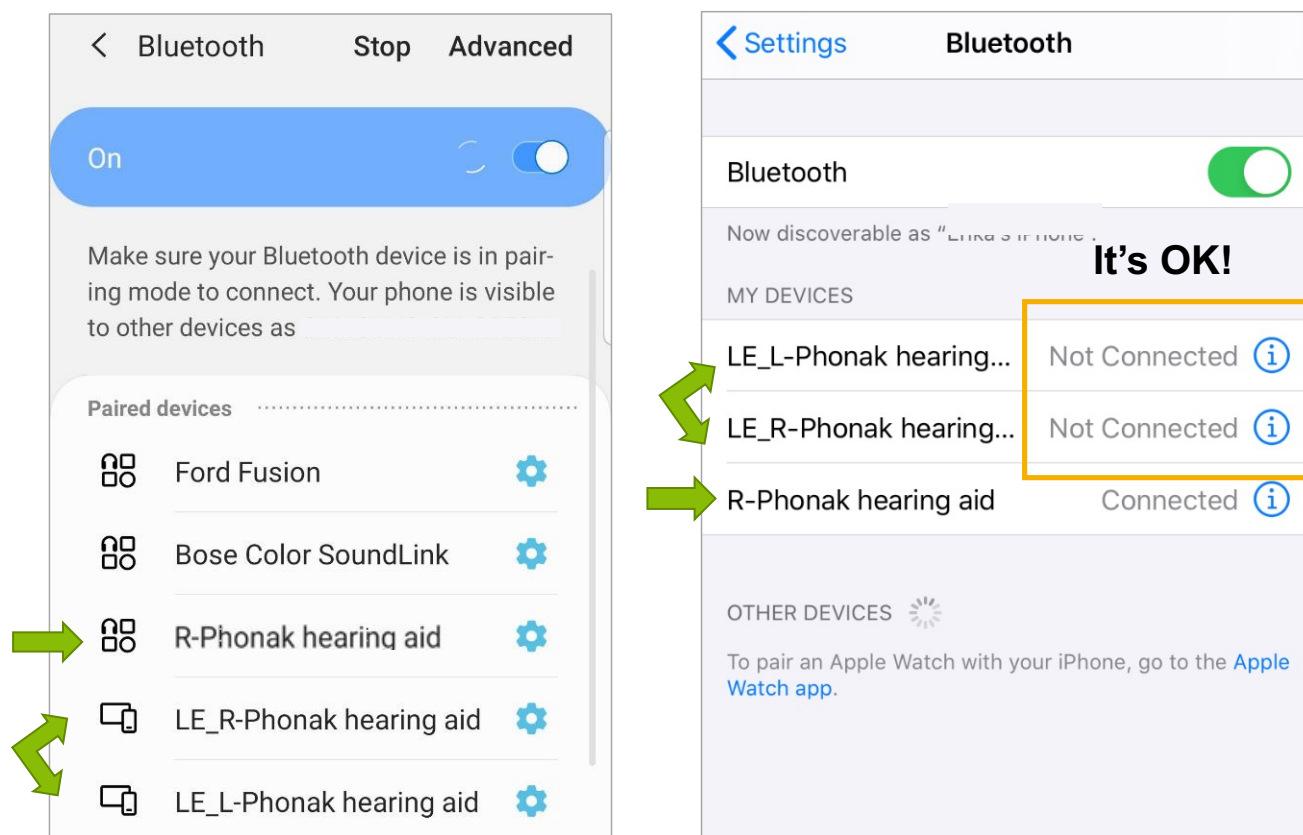
1. Download and install the myPhonak app.
2. Open the app and restart the hearing aids to enable pairing mode.
3. Tap "Pair device" on the home screen and follow the prompts.
4. Wait for the hearing aid(s) to show up. Once both devices are found tap on them to pair.
5. Accept any pop-up pairing requests.

Separate pairings show in Bluetooth menu

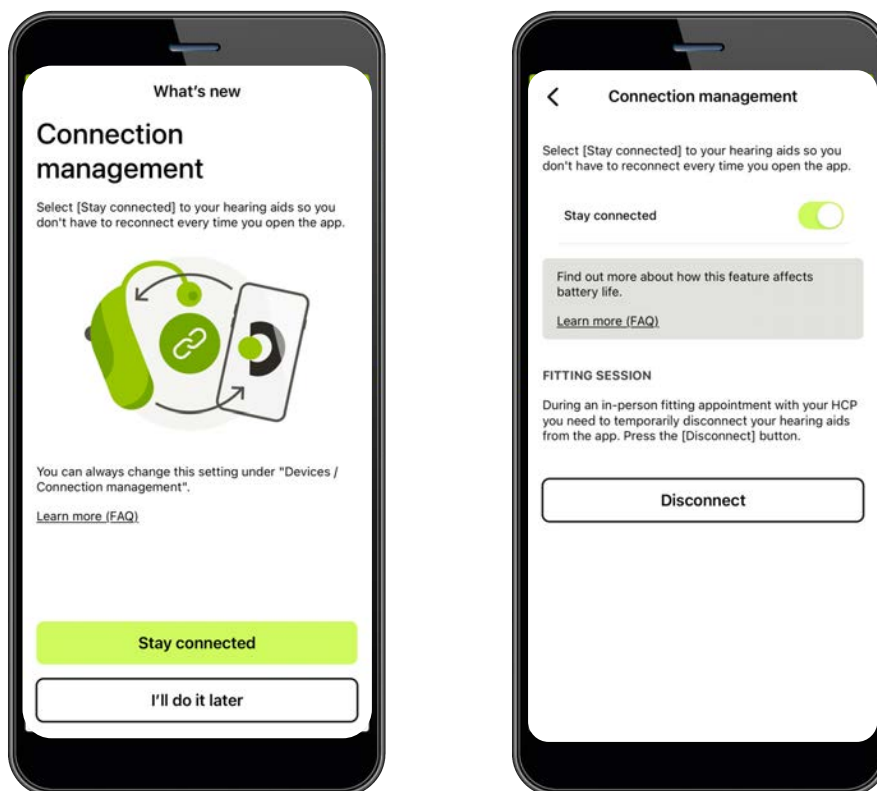
If the aids are paired for phone calls/streaming **and** with myPhonak, you will see **THREE** entries in the Bluetooth menu:

1-BT classic for phone/streaming

2 (1 per side)-BT Low Energy (LE) for myPhonak will auto-populate once pairing within the app is complete



myPhonak-Stay connected



- Minimize time needed to make changes
- Optional
- Turn BT off when connecting to Target

Basic Remote Control

Battery level

Volume control

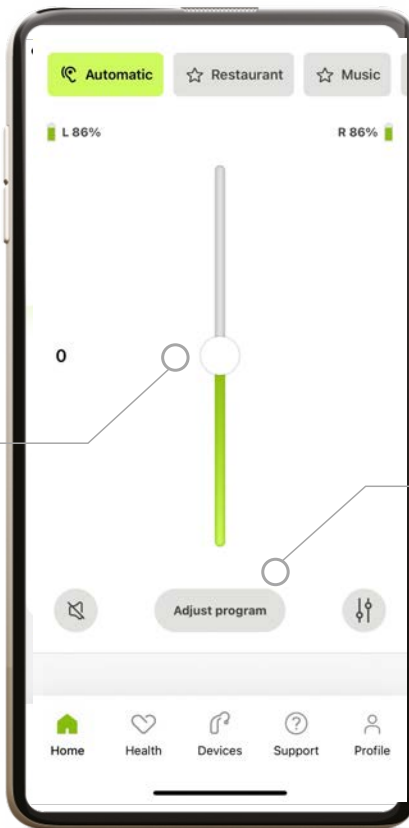
Mute

Program carousel

Note: Streaming programs automatically populate when a signal is present

Advanced remote control

Side independent volume



Home

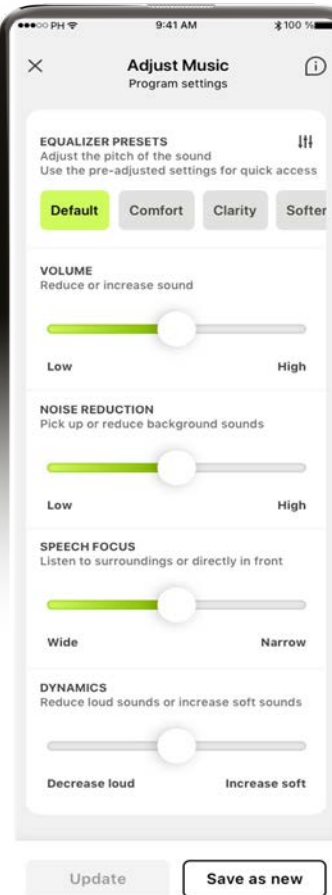
Advanced Remote Control

Volume

Overall loudness

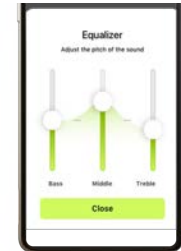
Speech Focus

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



Equalizer presets

Adjust pitch mix using presets or customize



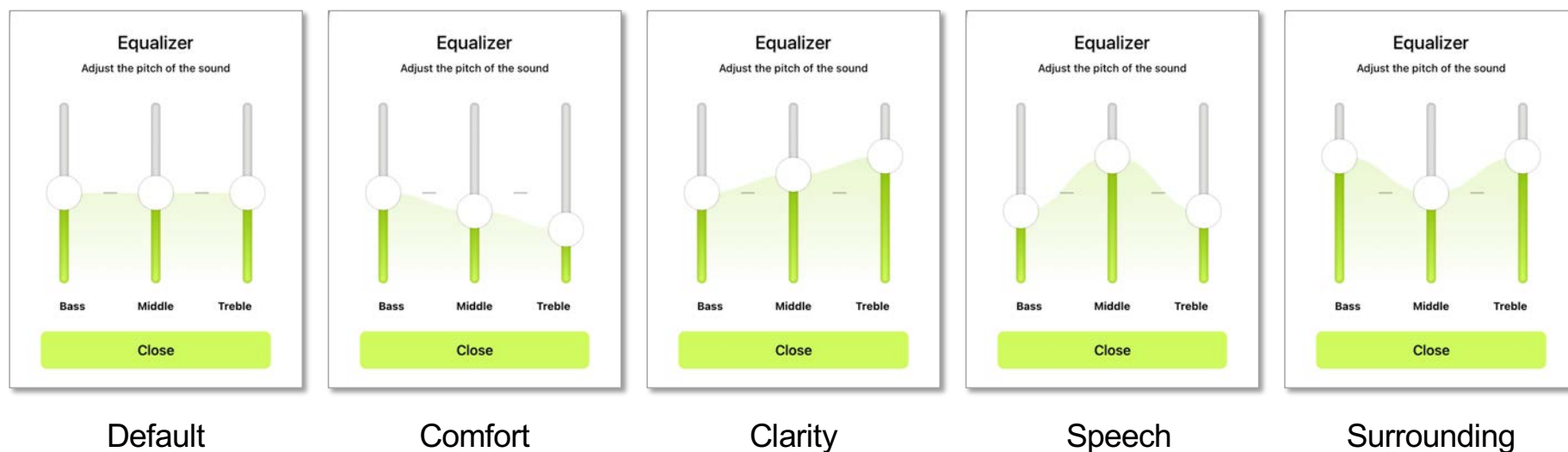
Noise reduction

- NoiseBlock
 - 50/30 level aids
 - Calm/Music/Streaming situations
- Dynamic Noise Cancellation
 - 90/70 level in Noise situations

Dynamics

Decrease loud = G80 reduced
Increase soft = G50 raised

Equalizer shortcuts

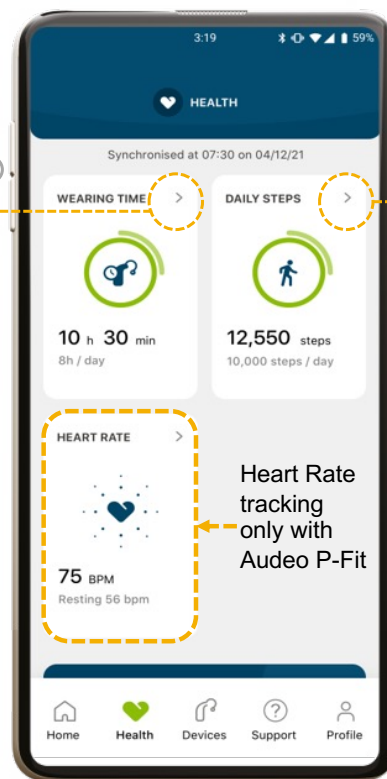
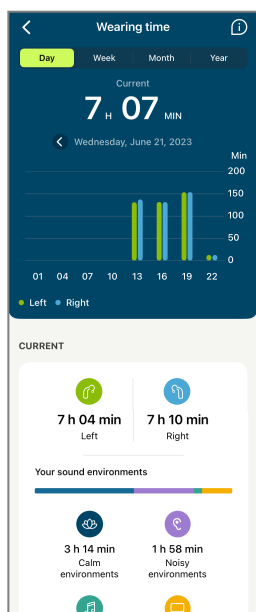


Bass: below 690 Hz Middle: 0.5 - 2 kHz Treble: 1.5 - 10 kHz

Health

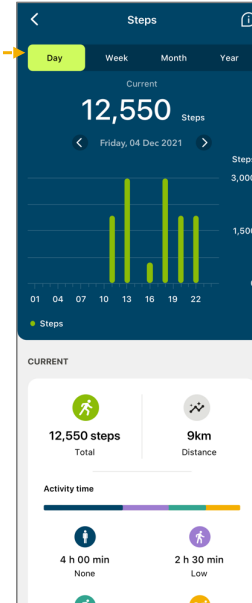
Wearing Time

- Wear time by
 - Day
 - Week
 - Month
 - Year
- Sound environments
 - Calm
 - Noisy
 - Music
 - Streaming
- Goal setting



Daily Steps

- Steps tracking by
 - Day
 - Week
 - Month
 - Year
- Activity level
 - None
 - Low
 - Medium
 - High
- Goal setting



Health

Devices

Hearing Aid Programs

Program management

Bluetooth Phone Calls

Change Bluetooth bandwidth

Tap Control

Configure functions & sensitivity

Cleaning Reminders

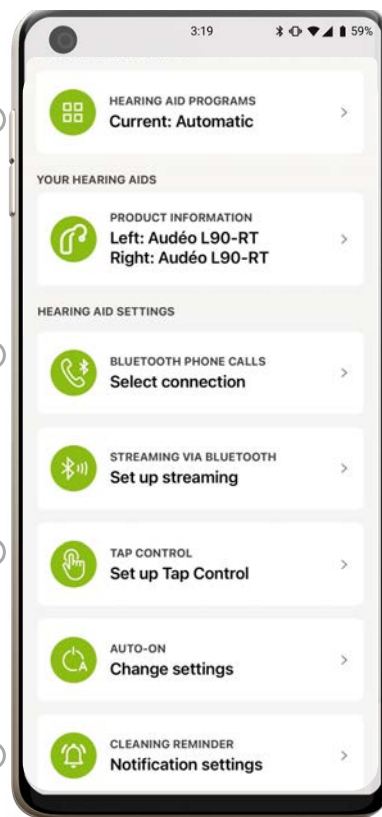
Product Information

Device SN & firmware version

Streaming via Bluetooth

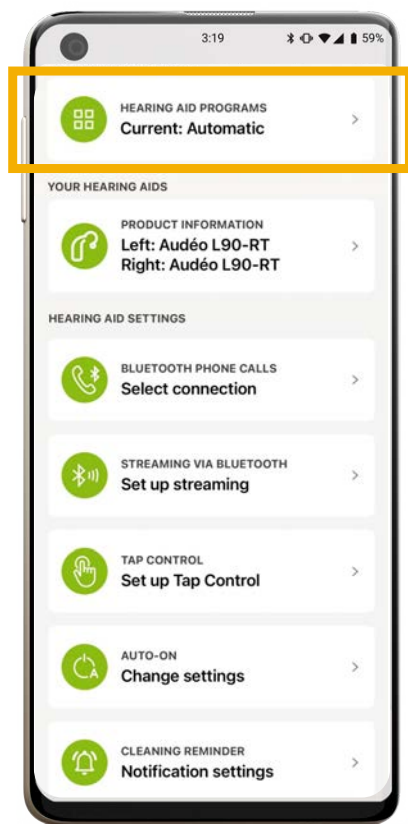
Instructions for BT Classic pairing

Auto-On



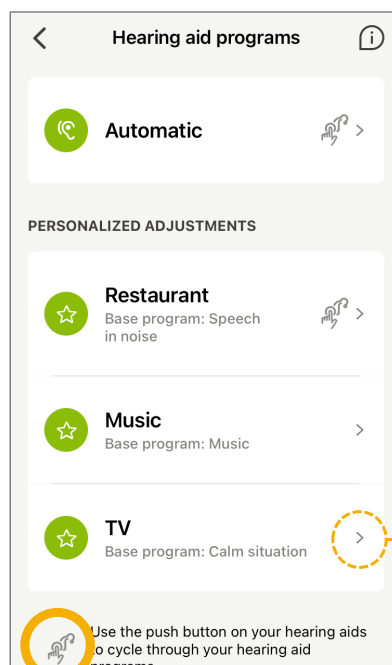
Devices

Devices: Program Management

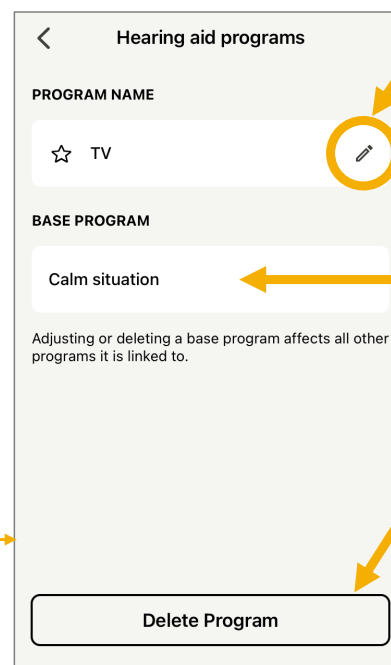


From Target

Custom programs available in app



Last used Custom program can be access via the pushbutton

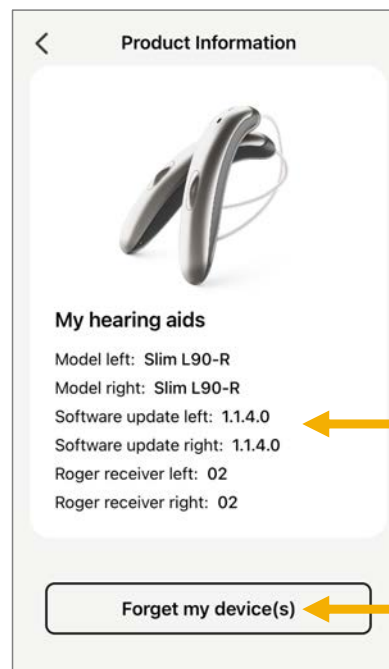
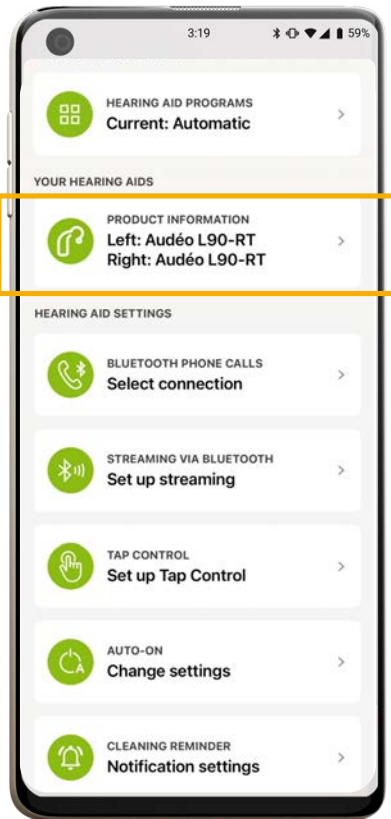


Edit program name

Base program
Up to 10 custom programs, 4 from the same base program

Custom programs can be deleted

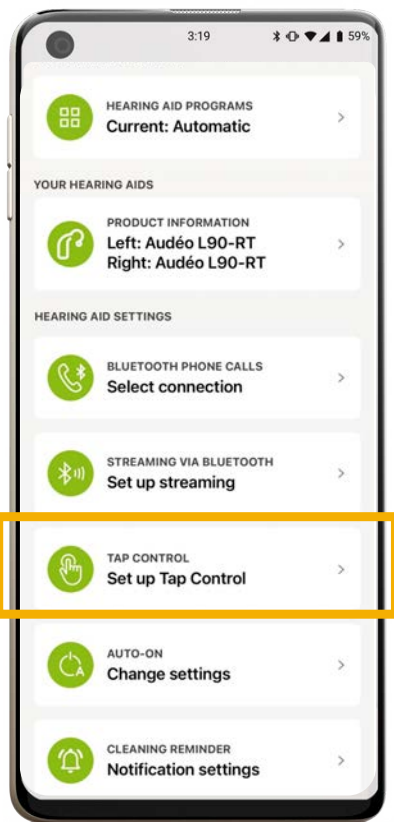
Devices: Product Information



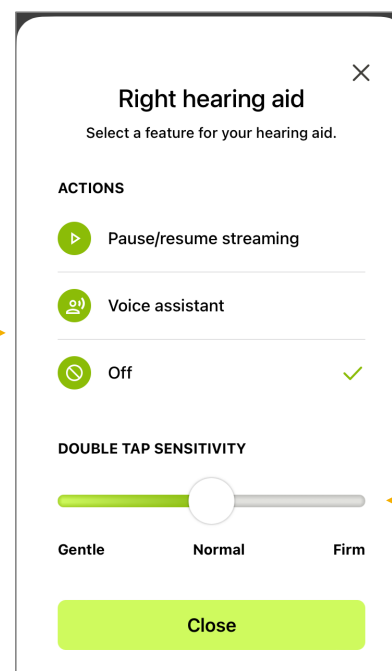
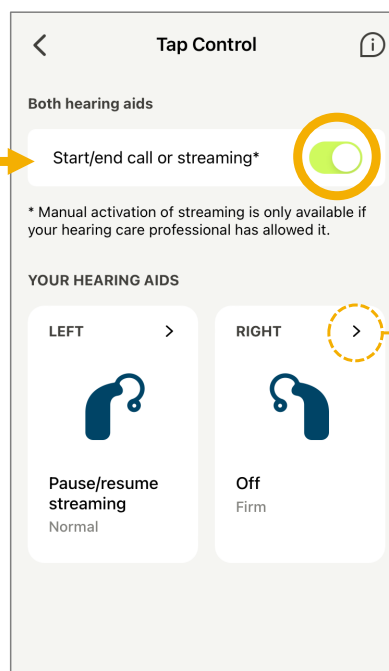
Firmware version

Deletes the pairing within the app

Devices: Tap Control



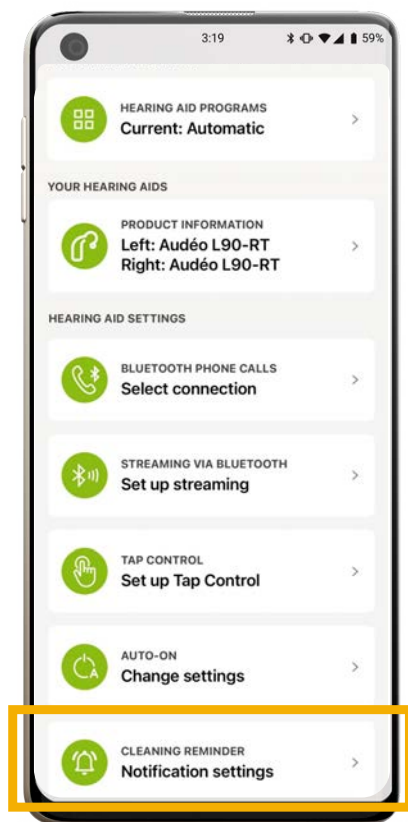
Enable/disable
tap for phone
calls



Select
function

Change tap
sensitivity

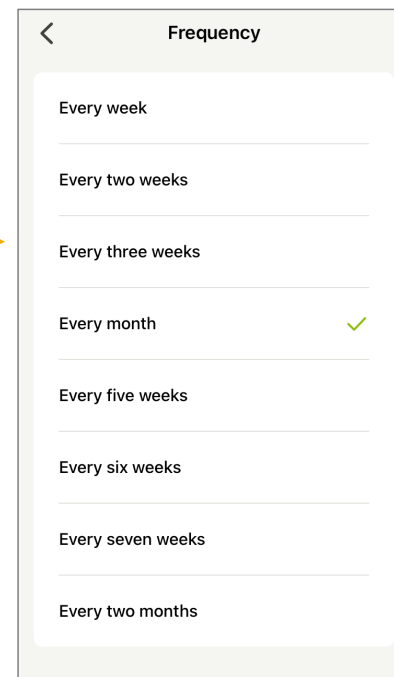
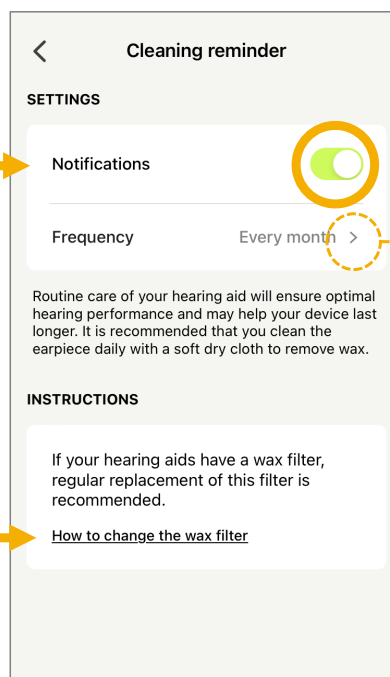
Devices: Cleaning Reminder



Enable notifications



Notification includes link to instructional video



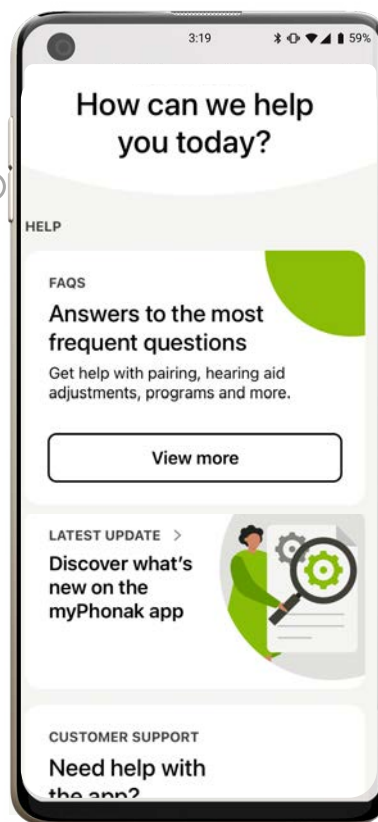
Choose frequency of reminder



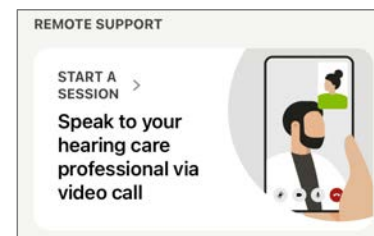
Support

Self-guided help

- FAQs
- App update info
- How to videos
- User guide



Provider-guided help



myPhonak version



Support

Profile

Personal details

Edit personal myphonak account information & change password

Log out

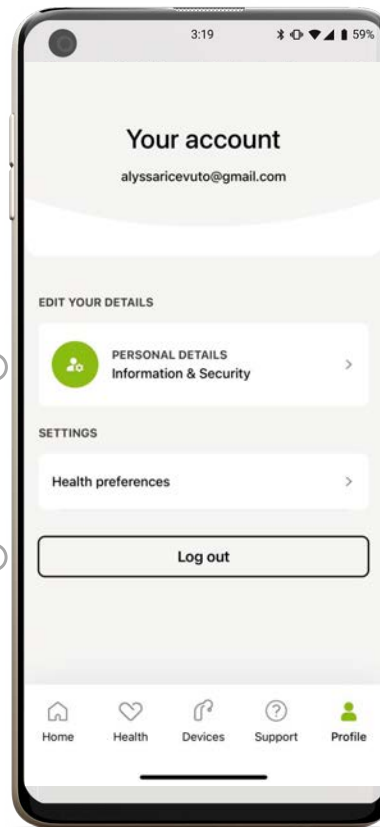
Sign out of account

Health preferences

Disable health tracking



Profile



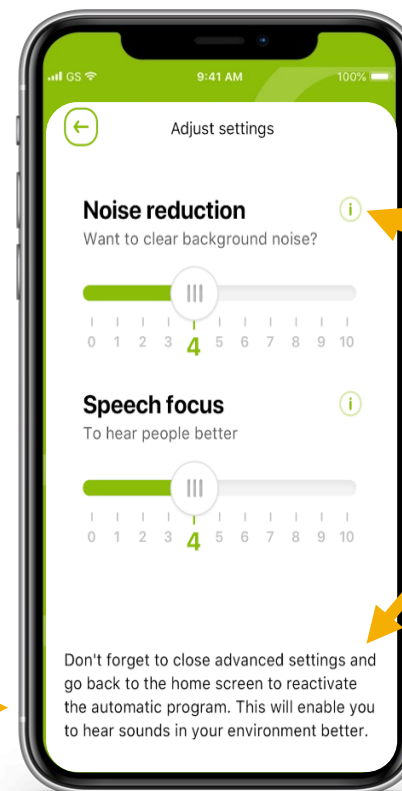
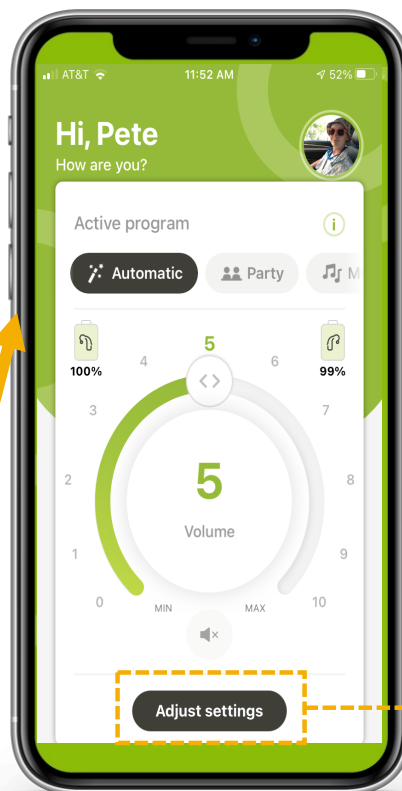
Keep it simple-myPhonak Junior



myPhonak Junior

Compatible with: Sky L | Sky M | Sky M Link
Audéo L (not Audéo Fit) | Audéo P | Audéo M
Naída L | Naída P | CROS L | CROS P

New user interface
for teens/tweens



Explains
how/when
to use
feature

Setting
changes
are
temporary

Phonak hearing aids must be paired for phone/audio streaming before the app will work.

A. True

B. False



**Knowledge
check**



Staying connected

Bluetooth Definitions

- **Pairing**

- When a trusted **relationship is established** between two Bluetooth devices.
- Pairing occurs when two devices agree that it is safe to communicate with one another and create a connection
- To pair two compatible devices, a shared passkey (password) is needed
- Many devices use the standard 0000, especially those without keyboards for manual number input
- Once two devices are paired, they do not need to be re-paired unless either device is reset or the pairing has been deleted

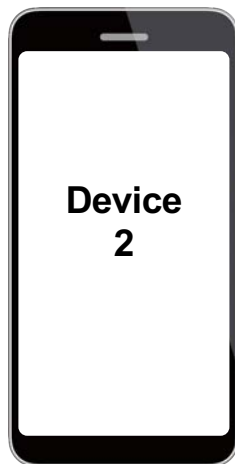
- **Connecting**

- When two previously paired devices recognize each other and **start talking**.

Pairing multiple devices



First device
paired normally

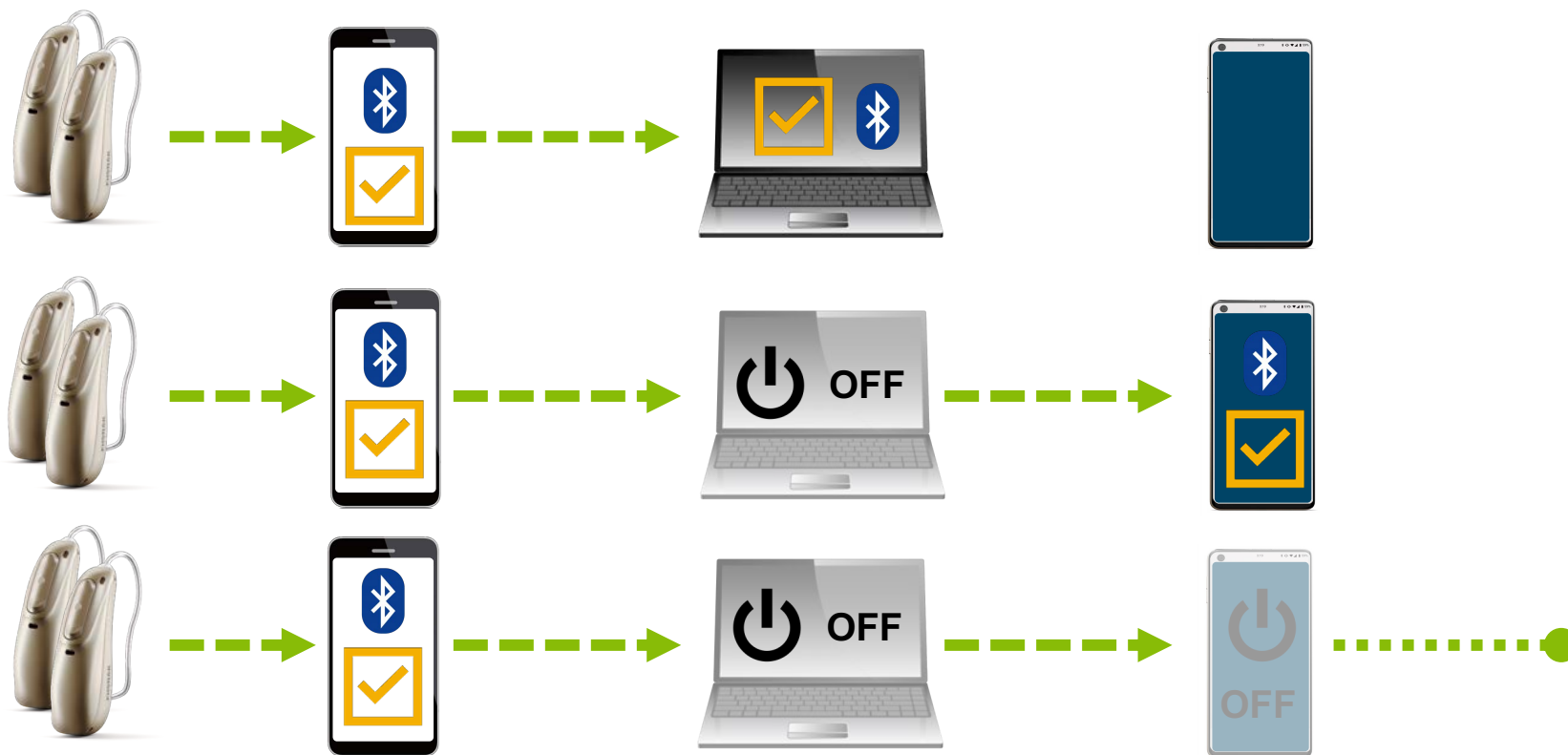


Second device
paired normally

Turn off
Bluetooth of
one active
device before
pairing third
device



Connecting multiple devices



Switching between devices



Leaving the connection range



If re-enter range quickly,
connection re-establishes
automatically



Automatic BT
search times out



Re-established connection via BT
menu or pressing multifunction
button prompts search



Factors that affect connection include:

- A. Distance
- B. Order of pairing/turning on
- C. Phone function
- D. Where you answer the call
- E. All of the above



**Knowledge
check**



When the
unexpected
happens

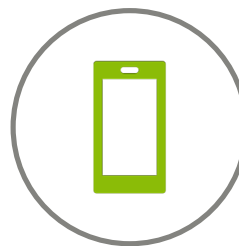
Bluetooth troubleshooting



Ask



**Power
off**



**OS/app
updates**



**Delete &
re-pair**

Bluetooth troubleshooting



**Delete &
re-pair**

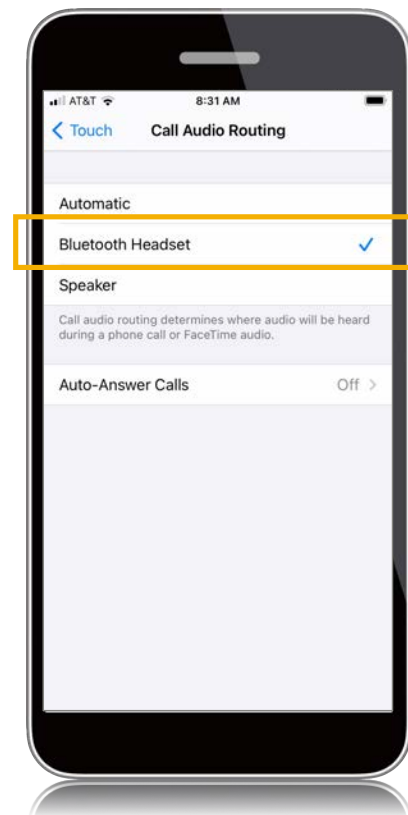
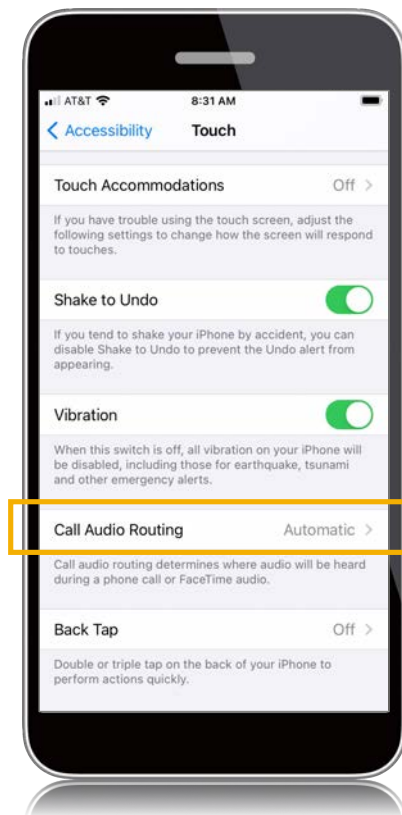
1. Delete all pairing from BT menu (BT Classic & LE_)
2. Delete the myPhonak app from the phone
3. Reboot the phone
4. Connect aids in Target
5. Under Bluetooth in Device Options, change the name of both sides
6. Hit the checkbox for Delete pairings
7. Save and close Target
8. Go back to the phone and make sure system sounds are turned off
9. Pair the BT Side aid in the phone's BT menu
10. After you pair to the phone for streaming, download the myPhonak app
11. Finally pair to the app

Changing default audio routing-iPhone

iOS 13 or higher:
Settings→Accessibility→Touch→
Call Audio Routing→
Bluetooth Headset



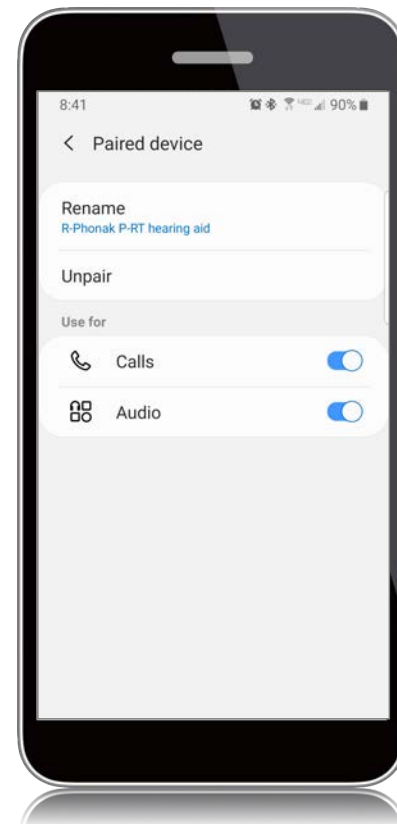
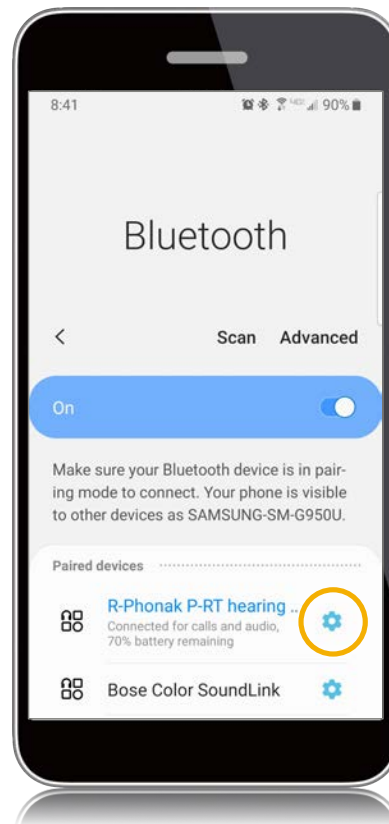
Bonus Tip: Use the Search bar within the Settings menu to quickly find functions



Changing default audio routing-Android

Android defaults to routing calls through Bluetooth headsets.

To disable:
Settings→ Connected Devices or
Connections→ Bluetooth→
Click the “gear” icon next to the
streaming device→
Uncheck “calls”

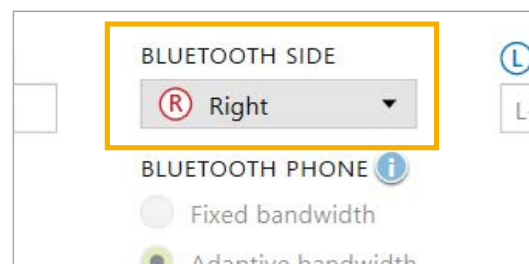


Complaint: Intermittency

Consider “realities of Bluetooth”

- Distance to phone
- Inside v. outside
- Cell reception

Consider BT Side



Complaint: Intermittency (computer streaming)

Consider changing bandwidth

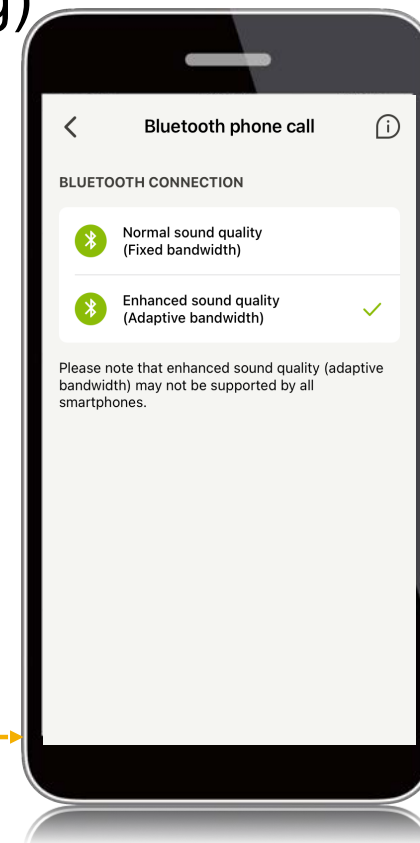
Target software→Device Options→Bluetooth

Ⓡ BLUETOOTH NAME R-Phonak hearing aid	BLUETOOTH SIDE Right	Ⓛ BLUETOOTH NAME L-Phonak hearing aid
BLUETOOTH PHONE ☐ Fixed bandwidth ☒ Adaptive bandwidth ☐ Delete pairings		
Bluetooth	Signals & alerts	Startup
DataLogging		

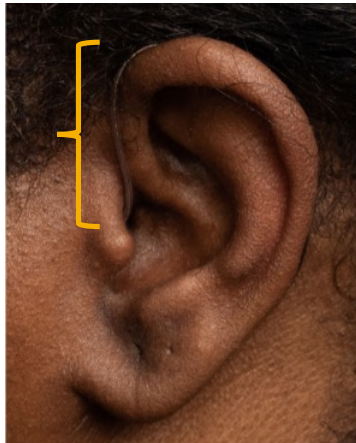
Devices→Bluetooth phone call


BLUETOOTH PHONE CALLS
 Select connection

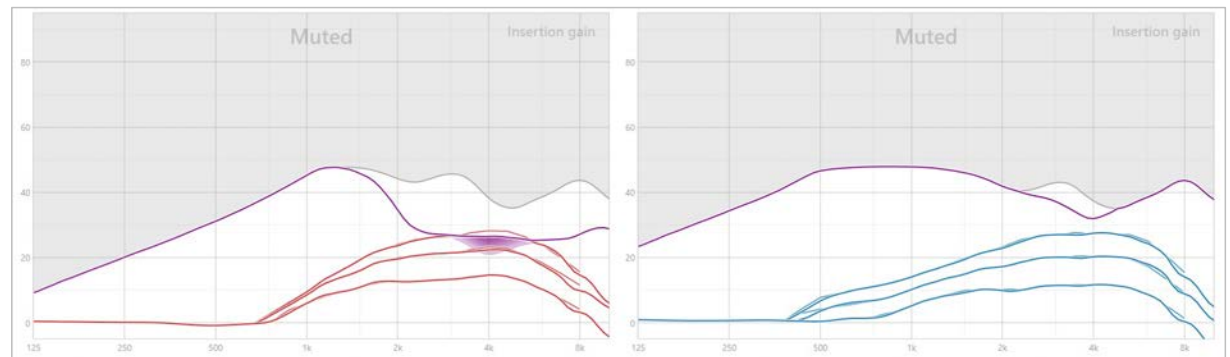




Complaint: Own voice pickup



Check receiver
wire length



Check the feedback test

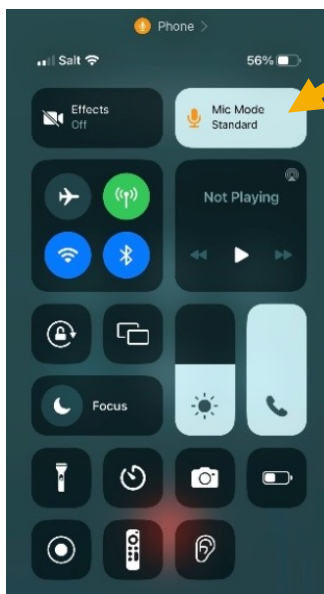
Hearing aid microphone

-6 dB ▲ ▼ -6 dB

Check microphone offset

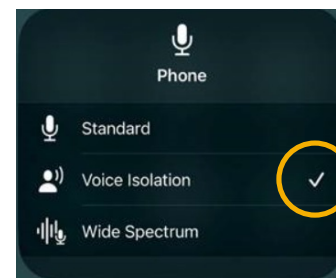
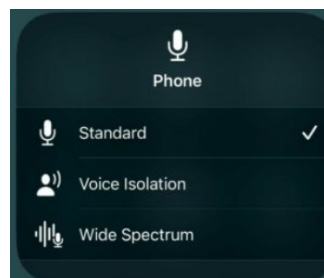
Voice Isolation for iPhone

1. While in a phone call using Phonak aids, swipe down from the top-right corner of the screen to access the Control Center.



2. On the top-right corner tap on the Mic Mode.

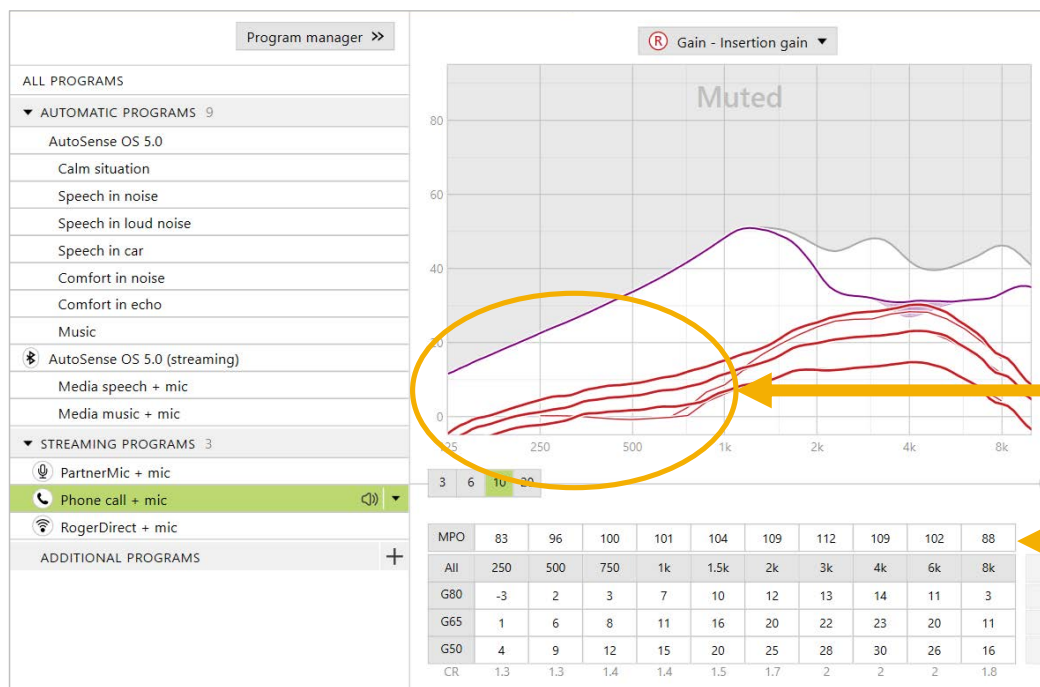
3. Select Voice Isolation.



Requirements:

- iOS 16.4 or later
- iPhone XR, iPhone XS models, and later

Complaint: Static on calls



Soft noise reduction

0

Off

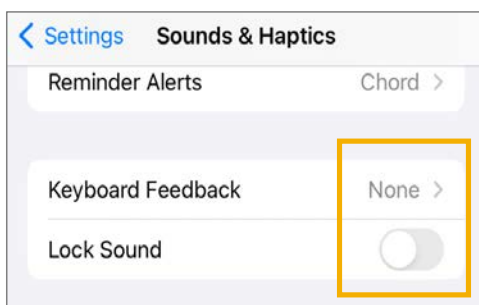
Check Soft noise reduction

Try decreasing low frequency gain

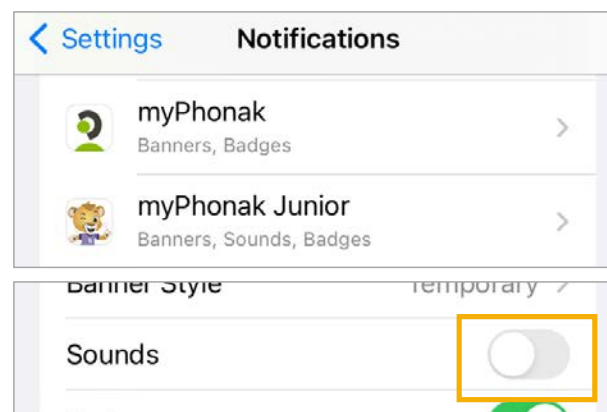
Try increasing MPO

Complaint: Sound fluctuations

Check system sounds, haptics,
raise to wake



Check notification sounds



For more detailed instructions for both Apple & Android, see earlier slide.

Complaint: Sound fluctuations

Check
microphone
offset

The screenshot displays the Phonak hearing aid software interface, specifically the 'Fine tuning' tab. The interface is divided into several sections:

- Top Bar:** Contains navigation tabs: 'Feedback & real ear test', 'AudiogramDirect', 'Global tuning', 'Fine tuning' (selected), 'DataLogging', and 'Device options'.
- Left Panel (Program manager):** Lists various programs under 'ALL PROGRAMS', 'AUTOMATIC PROGRAMS', and 'STREAMING PROGRAMS'. The 'Media speech + mic' program is highlighted with an orange arrow.
- Right Panel (Fine tuning):** Shows settings for the 'Hearing aid microphone'. The 'Enable microphone' checkbox is checked, and the 'Offset' is set to '-6 dB', which is highlighted with an orange box. Below this, there are sliders for 'WhistleBlock', 'SoundRelax', 'NoiseBlock', 'Soft noise reduction', and 'WindBlock'.
- Bottom Bar:** Contains tabs for 'Gain & MPO', 'Audibility fine tuning', 'Program options' (selected), 'SoundRecover2', and 'Automatic fine tuning'.

Complaint: Trouble connecting in Target

Turn phone's BT off or
confirm myPhonak app is
completely closed

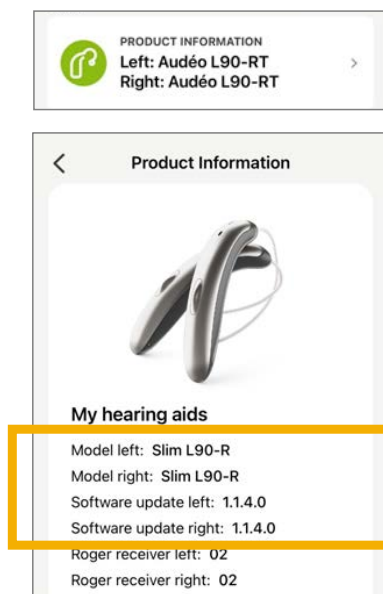
NoahLink Wireless uses LE BT



If reporting unexpected behavior, please include:

Hearing aid

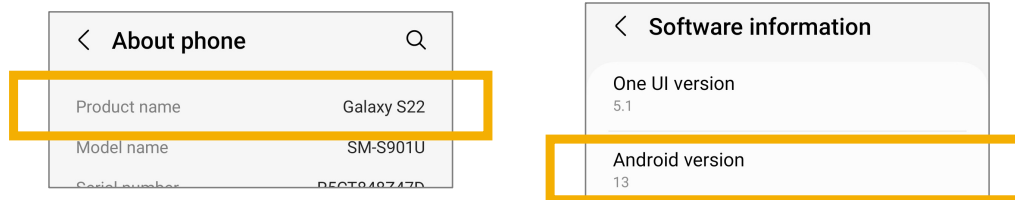
Model & firmware version



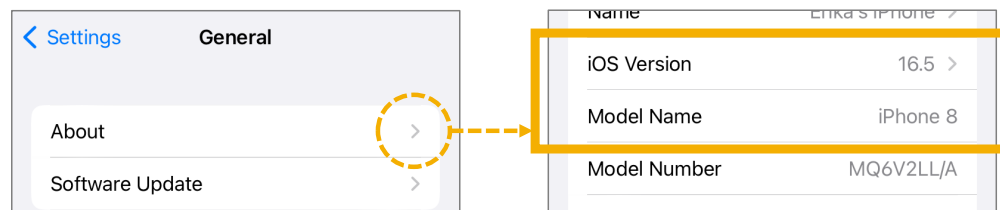
Phone

Make, Model & OS/iOS version

Android: Settings > Scroll down to About Phone > Find Product Name
From there look for Software Information > Find Android version



iPhone: Settings > General > About > Find Model Name and iOS Version





Resources &
support

Printed resource

Phonak Connectivity Brochure Part Number: 028-2540-03



Phonak Connectivity Display Stand Part Number: 041-2575-03



Online help is one click away — Phonak.com/support

PHONAK
life is on

Well-Hearing is Well-Being

Hearing Solutions

Support

For Professionals

Online hearing test Sign in



Find a provider

Support.

At Phonak, we're here to support you however we can, but if you're not finding what you're looking for, please feel free to contact a Phonak Support Representative.

It's important to never try to fix your device at home—leave the repairs to the experts. These devices are very sensitive, so screwdrivers, oil, and at-home repair attempts will likely cause irreparable damage.



How can we help?

Here are some quick solutions for common device issues.



Consumer Bluetooth hotline



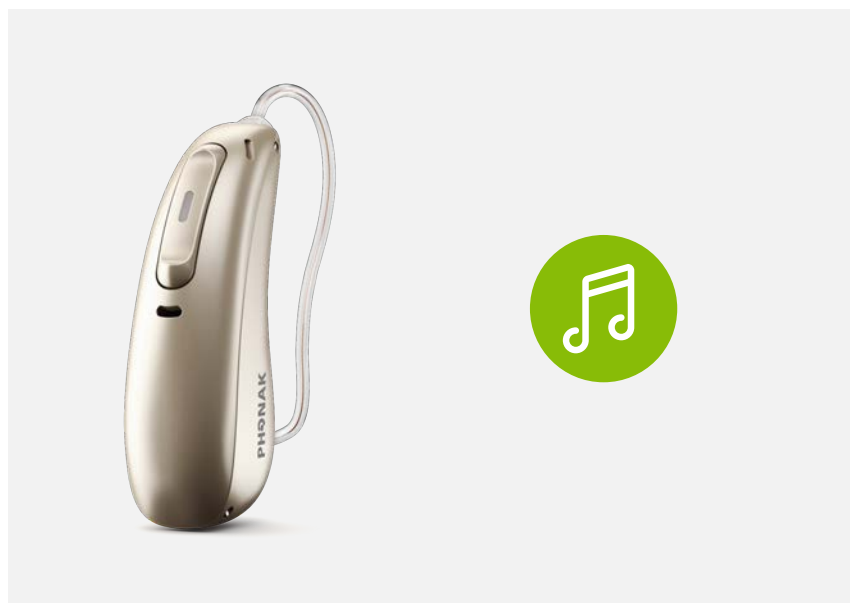
Save this
for the tricky
stuff!

800-679-4871
Monday-Friday
8am-4:30pm Central Time

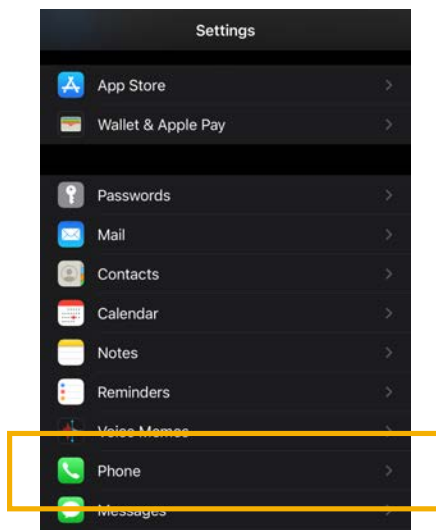


Some bonus fun

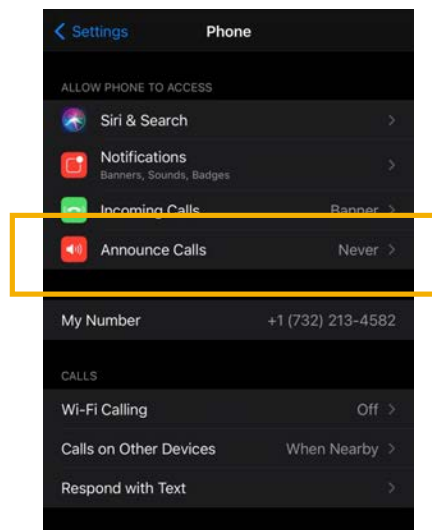
In-Band Ringtones



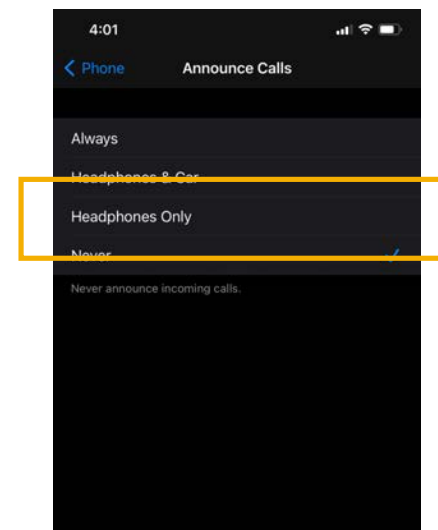
Call Announcements: iPhone



Phone

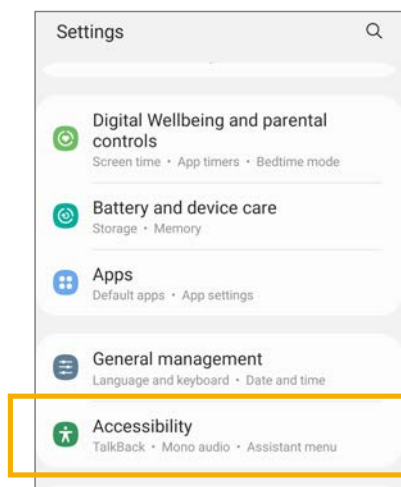


Announce Calls

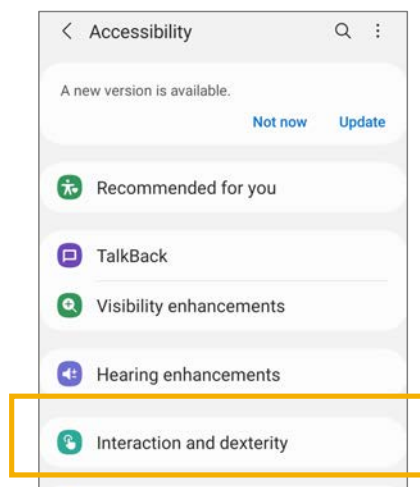


Headphones Only

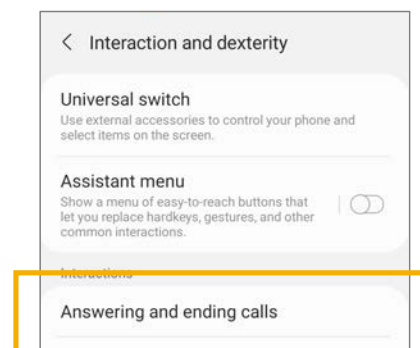
Call Announcements: Android



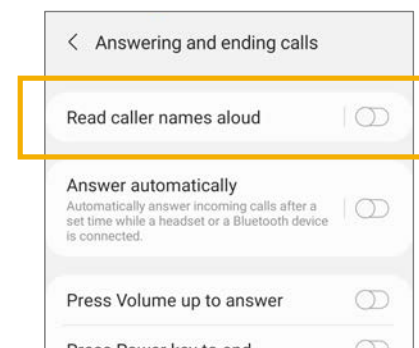
Accessibility



Interaction and Dexterity



Answering and Ending



Read Caller Names Aloud

Can I directly connect my hearing aids to my Smart TV?

- Yes! But...
- Sometimes becomes total output
- A Smart TV is typically a BT Classic Connection
 - TV Connector/Airstream uses 25% less battery power (using the A2DP BT language to stream)
 - For more efficient TV bingeing we recommend using the TV Connector-D



Re-name hearing aids

Client: Bell, Dessie | Instruments: Audéo L90-R | Fitting: Calm situation

Navigation: Feedback & real ear test | AudiogramDirect | Global tuning | Fine tuning | DataLogging | **Device options**

HEARING AIDS
R: 2233N0D0R
L: 2233N0D0T

ROGER RECEIVER
R: (02) installed
L: (02) installed

SERVICES
 Reports...
 Check warranty
 Available apps
 Phone compatibility
 Hearing aid support
 Accessory support

Behavior | Standard | Streaming | Phone call

SHORT PRESS
Volume ±10 dB (±5 steps)

LONG PRESS
Program change
AutoSense OS 5.0 (Startup)
Button down has same function

DOUBLE TAP
No function in Standard

BLUETOOTH NAME
R-Erika's hearing aid

BLUETOOTH SIDE
Right

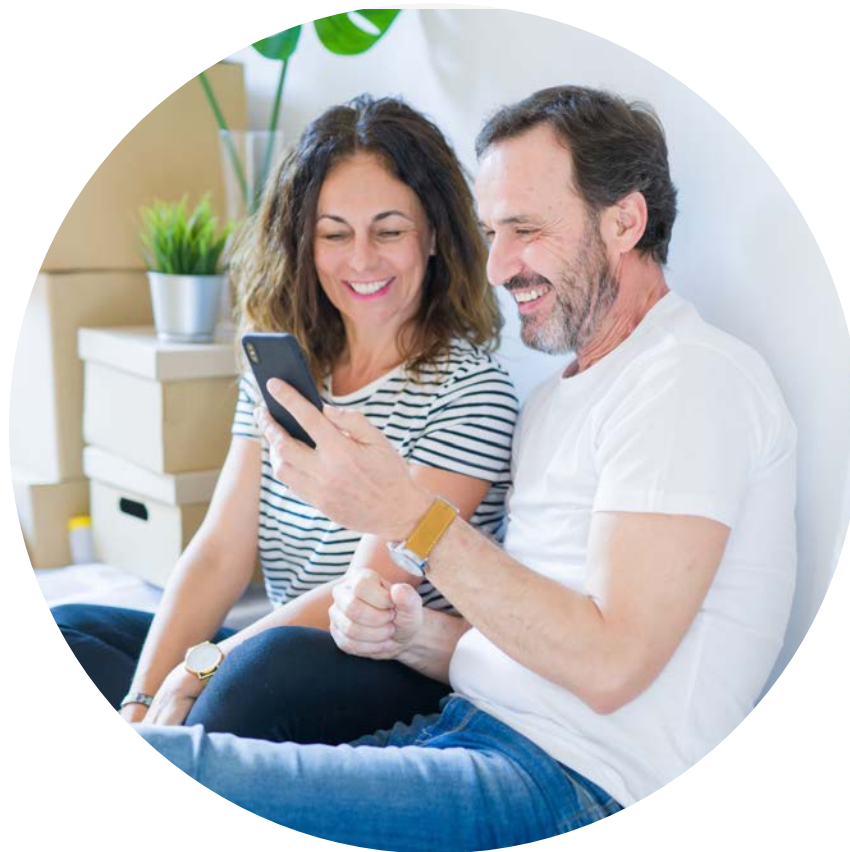
BLUETOOTH PHONE
 Fixed bandwidth
 Adaptive bandwidth
 Delete pairings

BLUETOOTH NAME
L-Erika's Phonak hearing

Manual controls | **Bluetooth** | Signals & alerts | Startup

You're now experts!

- Bluetooth basics
- Bluetooth Classic
- Bluetooth Low Energy (LE)
- Staying connected
- When the unexpected happens
- Bonus fun





Together,
we change lives .