

Welcome and house keeping

Webinar FAQs

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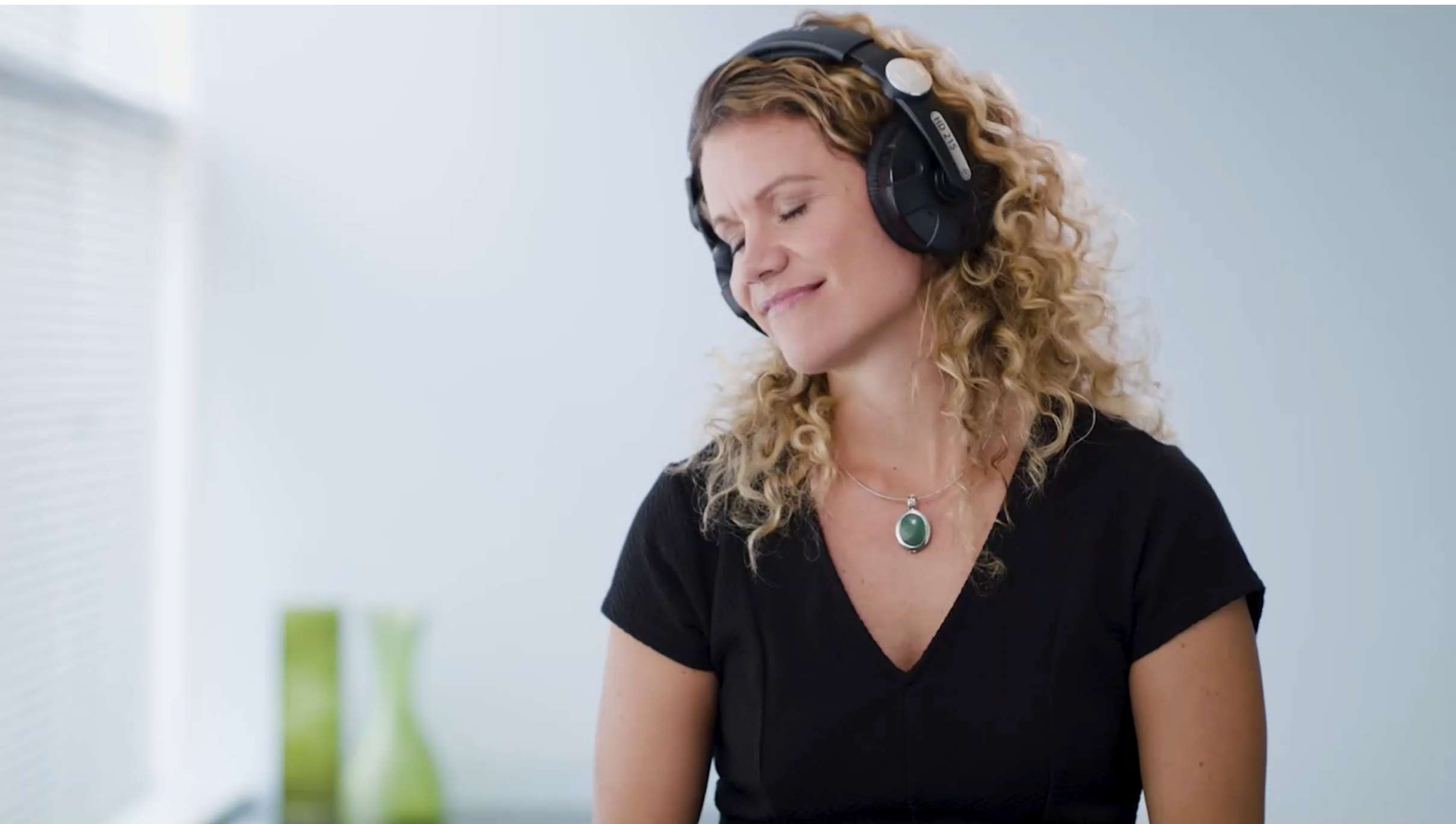
customerservice@audiologyonline.com

Use the Q&A window

Feeling Blue? Tips to help with Bluetooth™ connection







**“How do you feel
about Bluetooth?”**



Kristina Petraitis Audiology & Education Manager

Kristina Petraitis, AuD, is the Audiology & Education Manager at Unitron. Kristina received her bachelor's degree in Nursing in Australia and worked as an RN.

She furthered her career completing her Doctorate of Audiology from Northeast Ohio Audiology Consortium (NOAC) through Kent State University, Ohio.

Prior to joining Unitron in 2017, she spent over 7 years in an ENT clinic. From her years of interaction with patients in various settings, Kristina continues to focus on the patient experience as a primary importance to deliver world class health care.

Her favorite sound: [Cheers at the triathlon finish line](#)





Learner Outcomes

Upon completion of this course, attendees will be able to:

1. Identify the 2.4GHz protocols used with MFa hearing instruments and other Bluetooth™ devices
2. Describe and identify how to best pair for successful connection to Bluetooth™ devices and solutions
3. Identify and troubleshoot common connectivity issues

Does 2.4 GHz = **Bluetooth**?



Does 2.4 GHz $\neq$ Bluetooth?

What is Bluetooth?

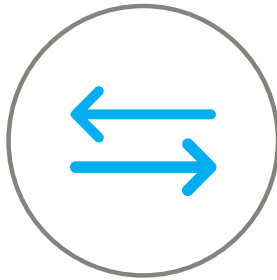


What is 2.4 GHz Technology?





What is Bluetooth?



Exchange
of audio
and data



2.4 GHz
radio band



Paired
connections

What percent of your fittings are you pairing to patient's phones/Bluetooth devices?

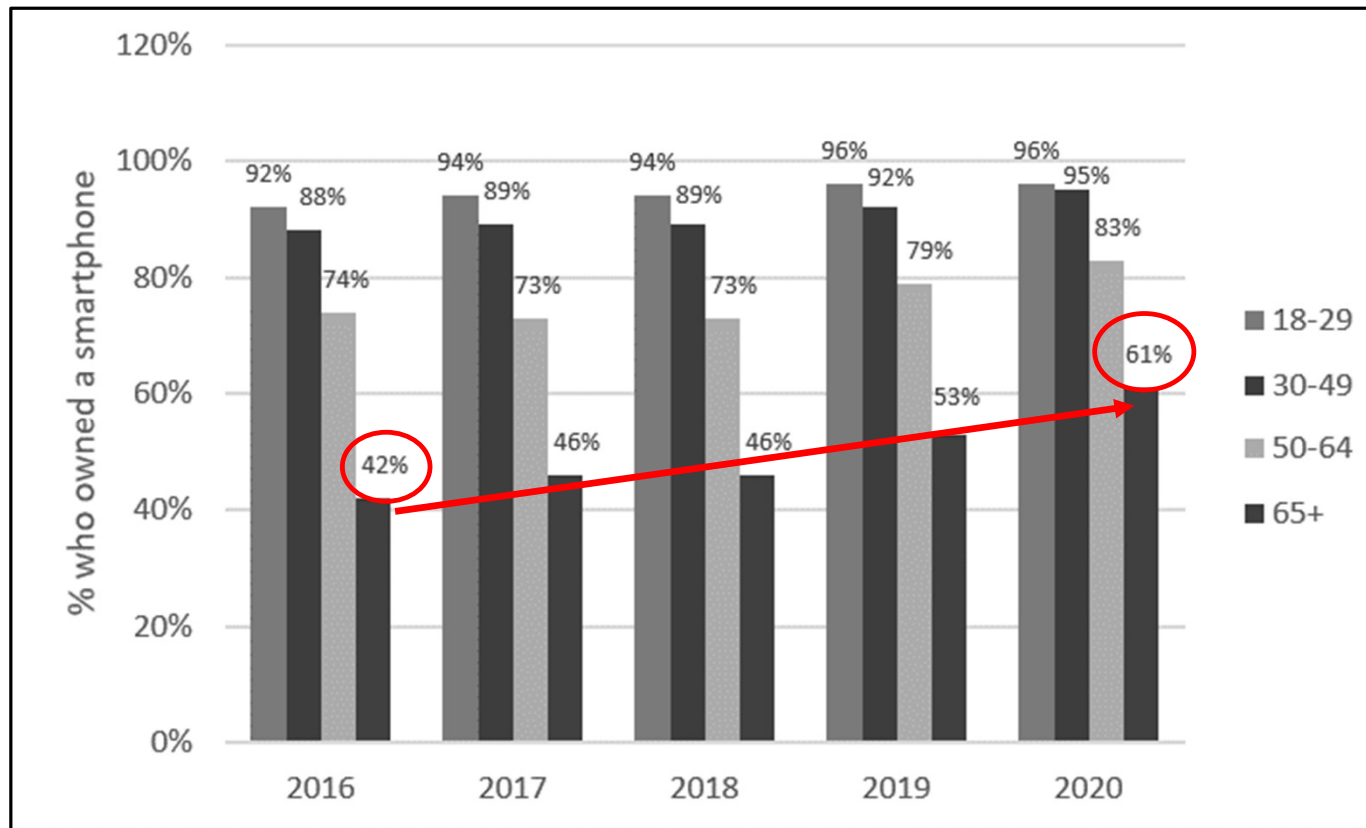
Phone usage by age group

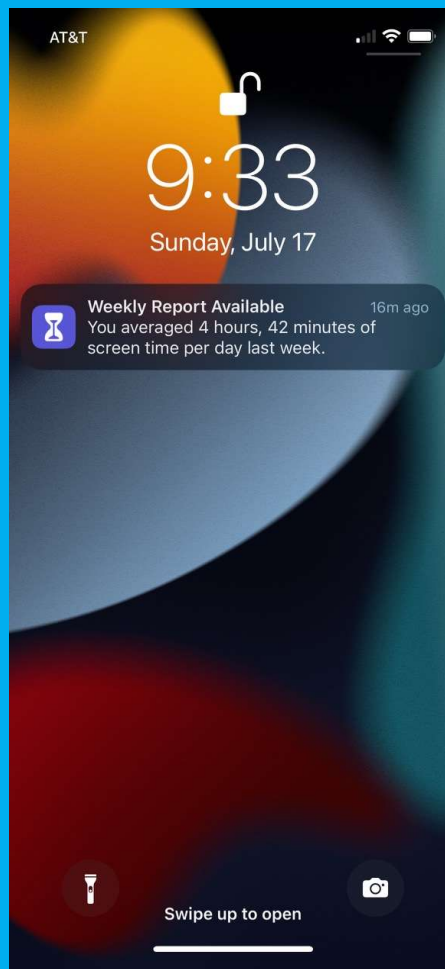
% of U.S. adults who say they own a ...

	Cellphone	Smartphone	Cellphone, but not smartphone
Total	97%	85%	11%
Men	97%	85%	11%
Women	98%	85%	12%
Ages 18-29	100%	96%	4%
30-49	100%	95%	5%
50-64	97%	83%	12%
65+	92%	61%	29%

Pew Research – Mobile fact sheet, April 7, 2021

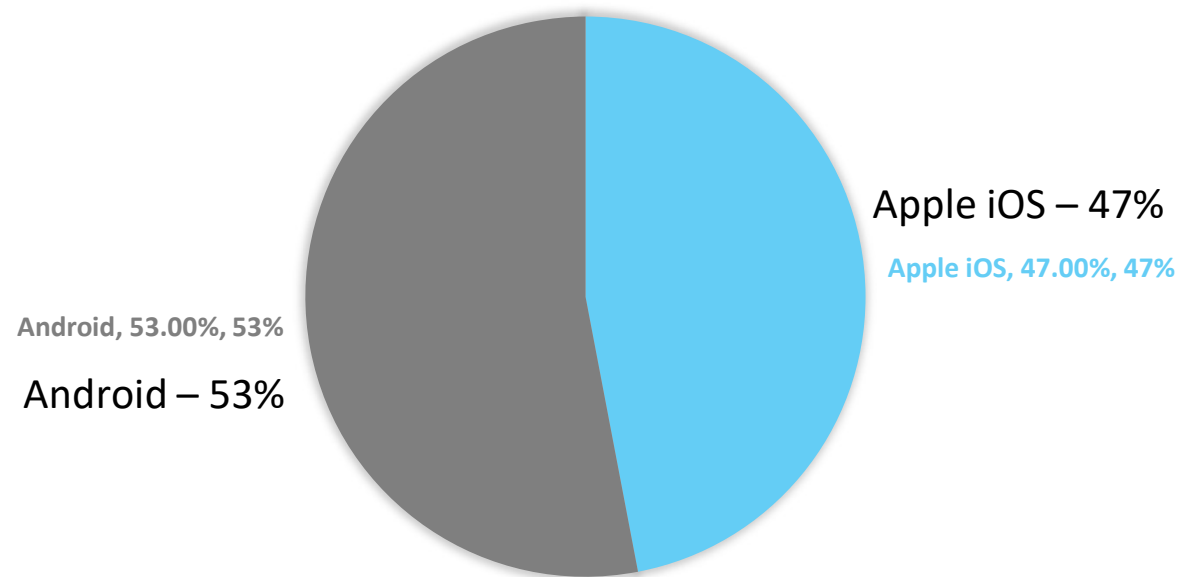
Phone usage by age group





Phone usage - Apple vs Android

2022 US SMARTPHONE USAGE

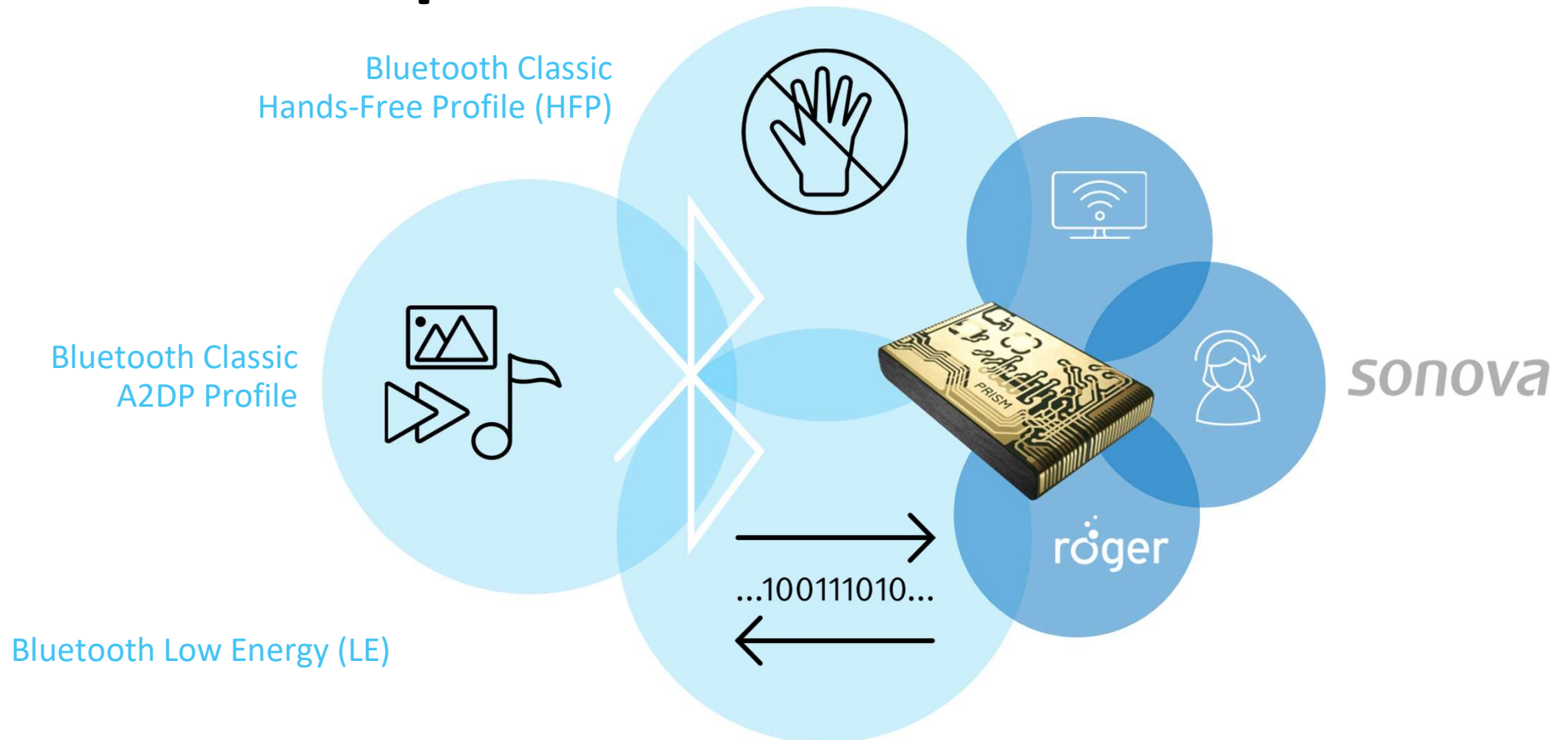


Source: emarketer smartphone usage, 2022

What WAS the #1 difficulty with hearing loss and hearing instruments?

What IS the #1 difficulty with hearing loss and hearing instruments?

Bluetooth protocols

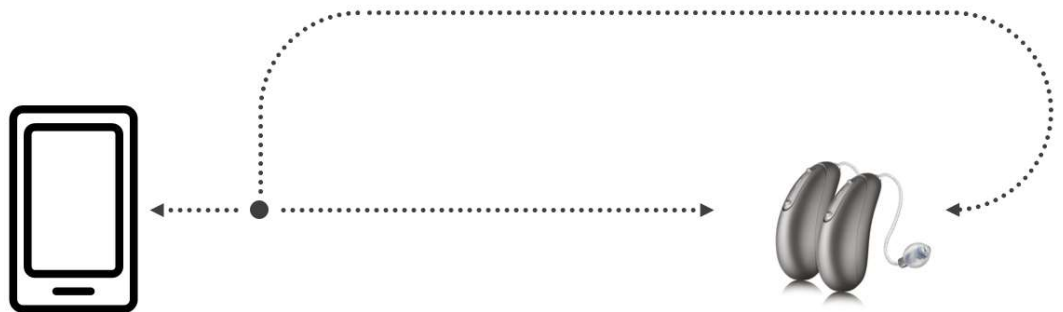


Truly hands-free



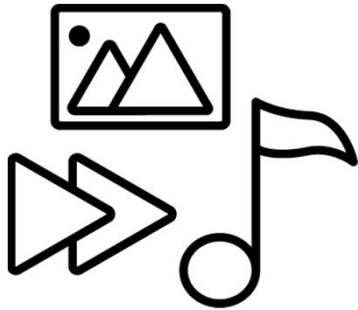
Bluetooth classic
hands-free profile

- Made for all phones* – Android and iOS
- Phone calls to both ears
- Truly hands-free – key advantage over ASHA protocol
 - 2-way protocol means microphones in hearing instrument pick up the voice of the wearer



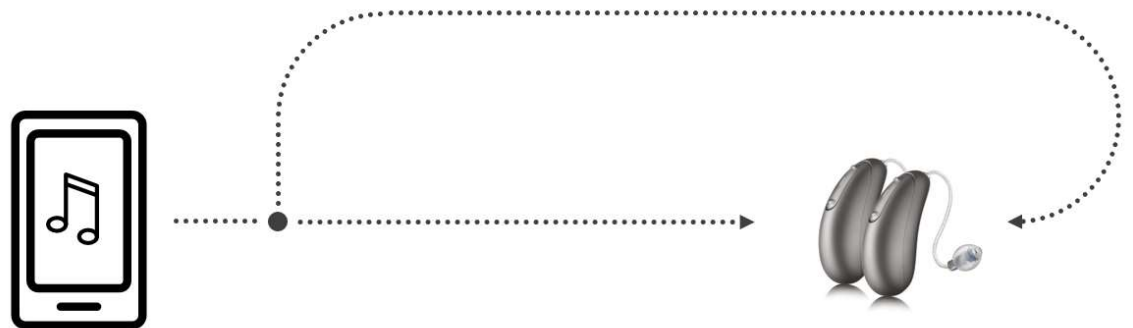
*Smartphones and traditional mobile phones with a compatible Bluetooth Hands-Free Profile

Stellar media streaming sound quality



Bluetooth Classic
A2DP profile

- Made for all phones* – Android and iOS
- Binaural media streaming
- Superior, stereo sound quality



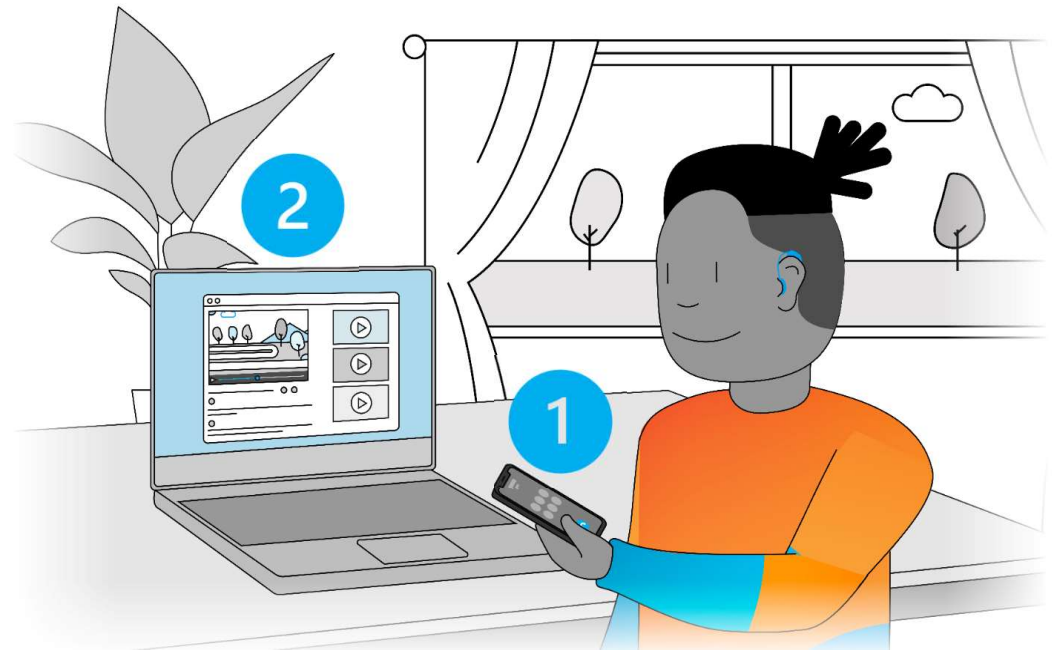
*Smartphones and traditional mobile phones with a compatible Bluetooth Hands-Free Profile

Two active Bluetooth connections makes it easier



Mix and match combinations of:

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





Bluetooth background

- Smartphone use continues to increase
- At least 1 in every 3 calls to tech support is about Bluetooth or connectivity

Wireless audio-streaming options

Bluetooth Classic (standard)	Apple Hands-free	Android ASHA	Bluetooth LE Audio “Auracast”
Still unique to Sonova • Android & iOS • Bluetooth classic A2DP ○ One way for media streaming • Bluetooth classic Hands-free ○ 2-way transmission / truly hands-free calling • Compatible with over 6,800 phones	Recently available for several other manufacturers • Apple iOS only if supported by hearing instruments • 2-way transmission / hands-free calling	Some availability across most other manufacturers • Android, but only certain models • 1-way transmission so NOT hands-free calling	Standard began around 2013 Rollout 202X • For both Apple and Android later models • Expected to be hands-free ○ Need BT v5.2 or higher ○ Venue needs to have “Auracast” transmitter (target to replace T-coil)



A future with Auracast is exciting

Public accessibility spreads

Auracast “ready” devices

What does this mean today?

It will take a little bit of time because we have billions of BT devices

1. Have the right transmitter technology so radios cannot be too old – need to be updated
2. Upgraded with the latest BT LE protocol

Bluetooth definition

Bluetooth definitions

Pairing vs Connecting

PAIRING

- A trusted **relationship is established** between two Bluetooth devices
- Pairing occurs with two devices when it is safe to communicate with one another and create a connection
- To pair two compatible devices, a shared passkey is needed
 - Many devices use the standard 0000
- Once two devices are paired, they do not need to be re-paired unless either device is reset

CONNECTING

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

Bluetooth pairing

Recommended sequence



Bluetooth pairing – phone

1. Phone Settings > Bluetooth
2. Put hearing instruments into pairing mode (stays in pairing mode for ~3 minutes)

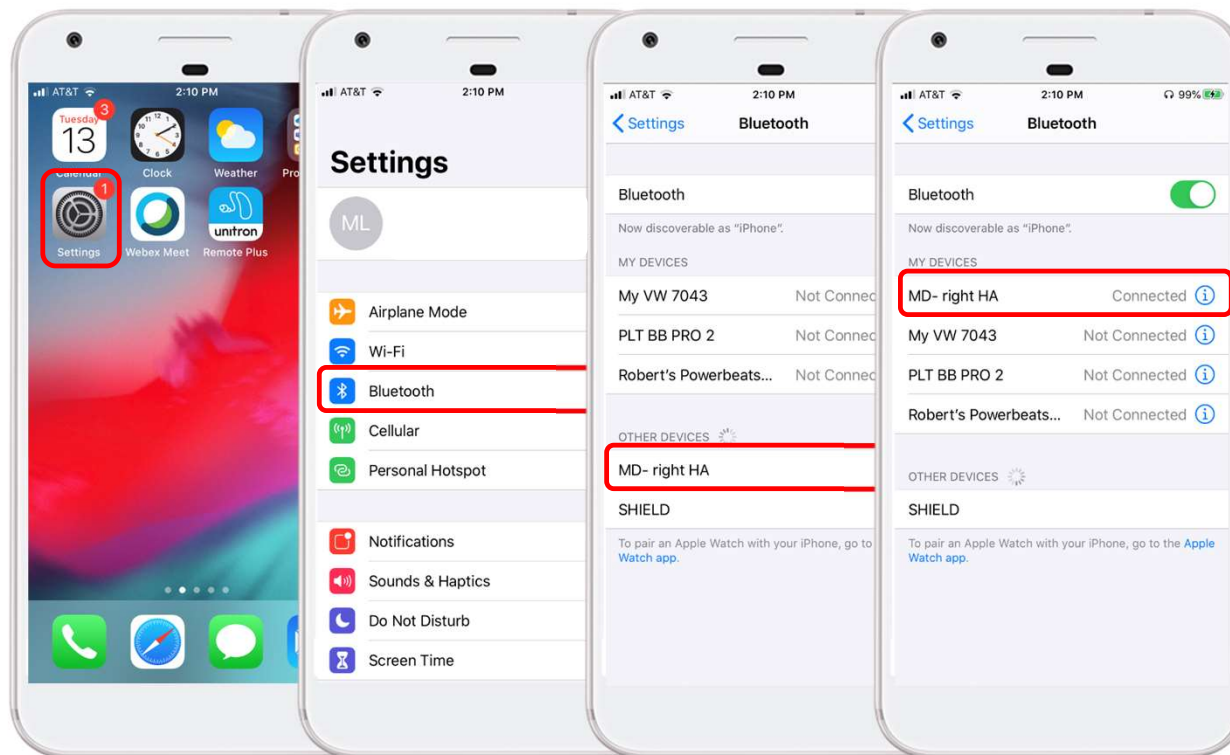
Lithium-ion rechargeable instruments

- Press and hold the bottom push button for ~3 seconds to turn off (red light), the release and push again for ~2 seconds to turn back on (green flashing light)
- **OR** put the instruments into their plugged-in charger and back out

Disposable battery instruments

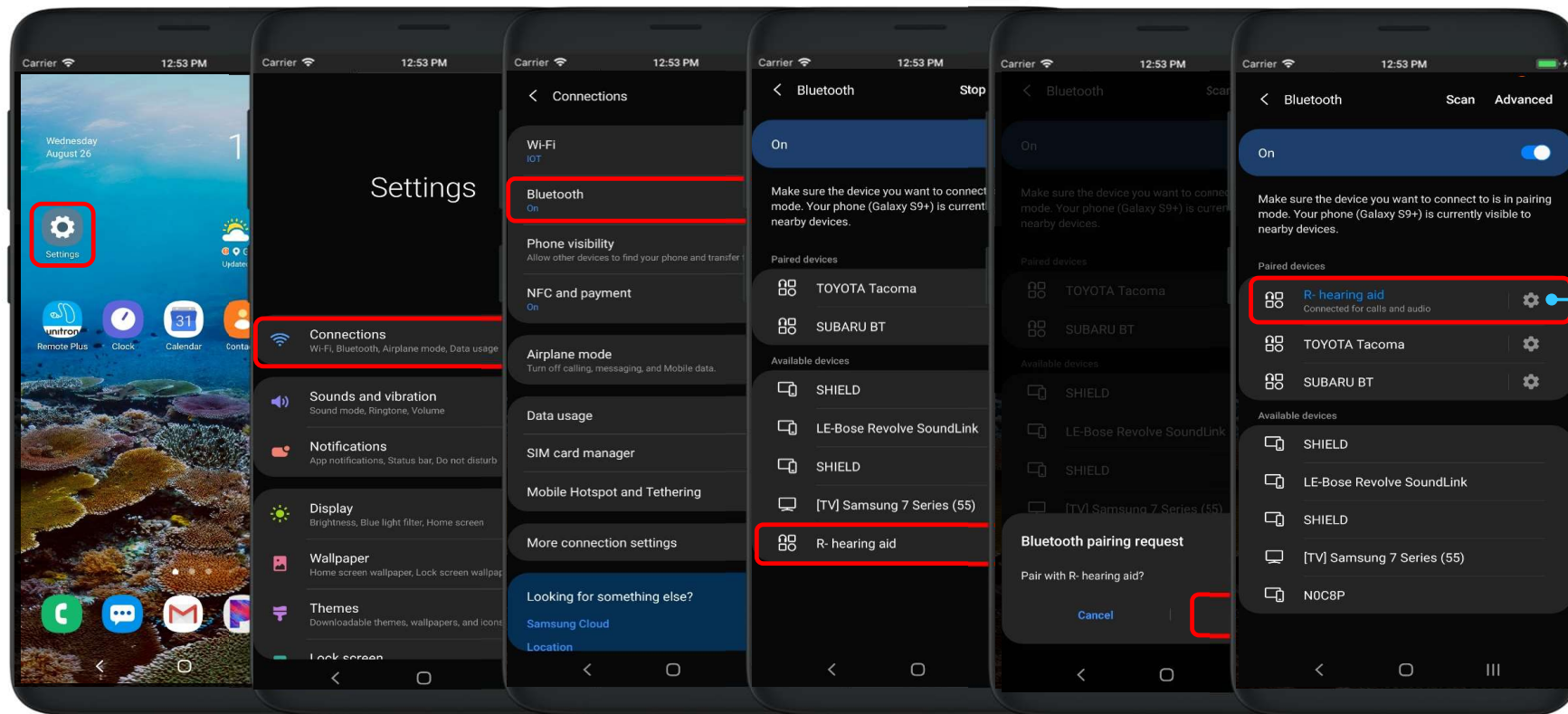
- Open and close the battery door

Bluetooth pairing – iPhone



— Paired to phone
(Bluetooth Classic
for phone and
media streaming)

Bluetooth pairing – Android



Paired to phone
(Bluetooth Classic
for phone and
media streaming)

Bluetooth pairing – App

After programming hearing instruments via fitting software:

1. Pair to the phone
2. Pair to the app
 - a. Walk through the welcome screens & when prompted pair

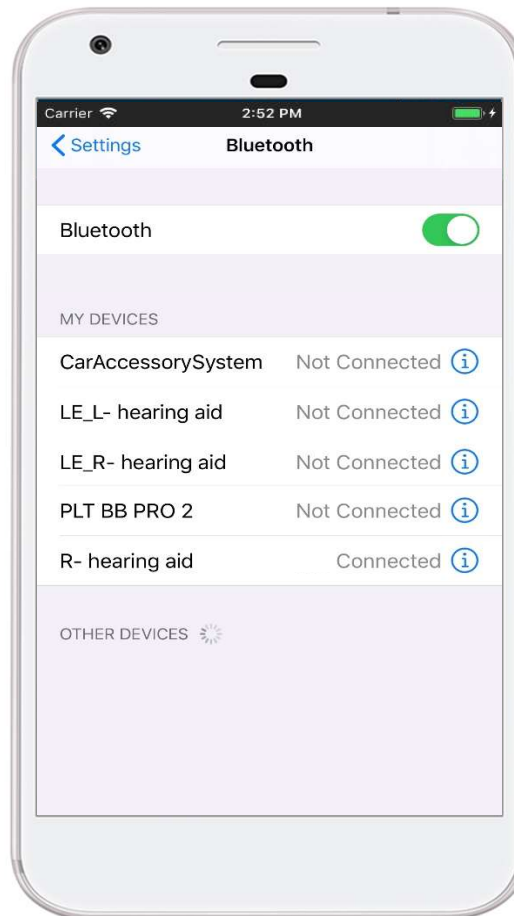
Bluetooth pairing – Accessories

After programming hearing instruments via fitting software:

1. Pair to the phone
2. Pair to the app
 - a. Walk through the welcome screens & when prompted pair
3. Pair to any accessories

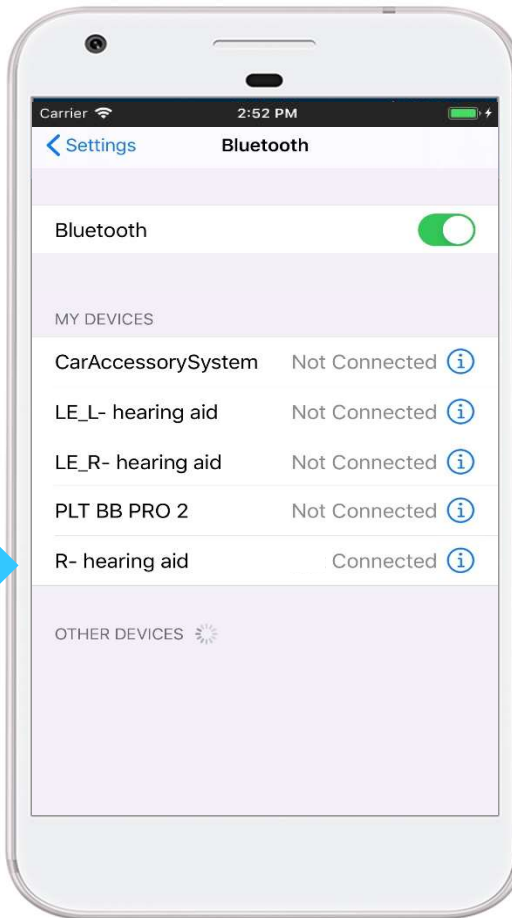
What's connected

Verify what's connected?



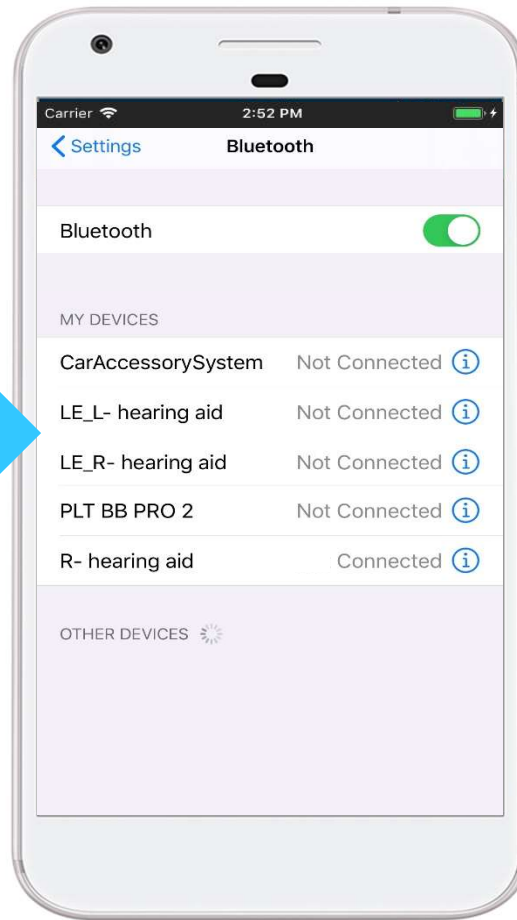
Verify what's connected?

Paired to phone
(Bluetooth Classic for phone
and media streaming)



Verify what's connected?

Paired to app
(Bluetooth LE)





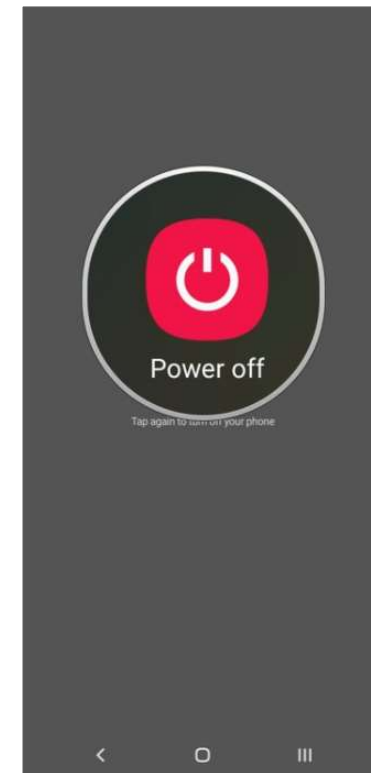
Patient says:

“My hearing instruments are not connecting to my phone”

Connectivity troubleshooting tips

Patient reports connectivity issues:

1. Fully power down the phone



Connectivity troubleshooting tips

Patient reports connectivity issues:

1. Fully power down the phone
2. Nearing storage capacity?



Connectivity troubleshooting tips

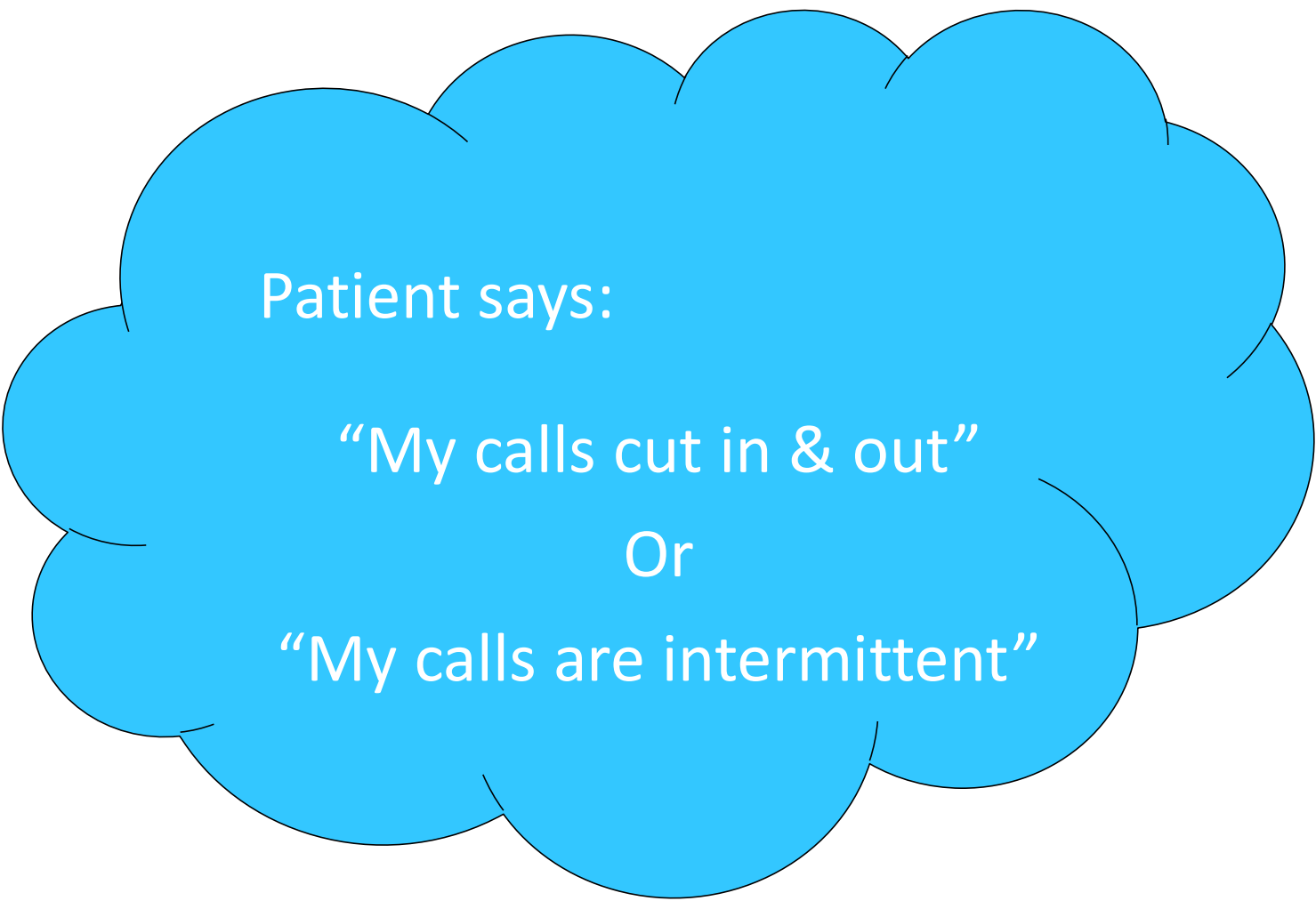
Patient reports connectivity issues:

1. Fully power down the phone
2. Nearing storage capacity?
3. Close apps & search engines running in background

If connectivity issues continues:

4. Delete Bluetooth pairings & start over



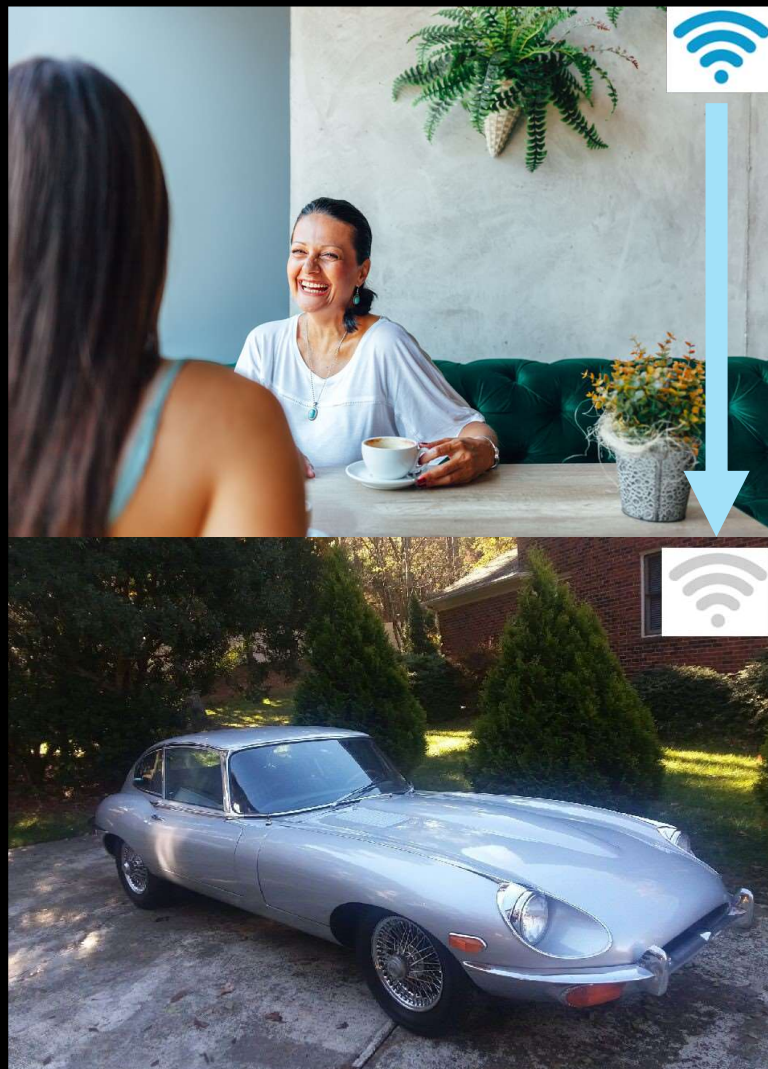


Patient says:

“My calls cut in & out”

Or

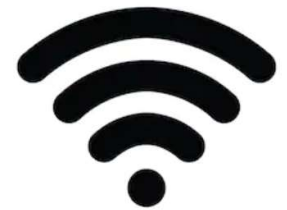
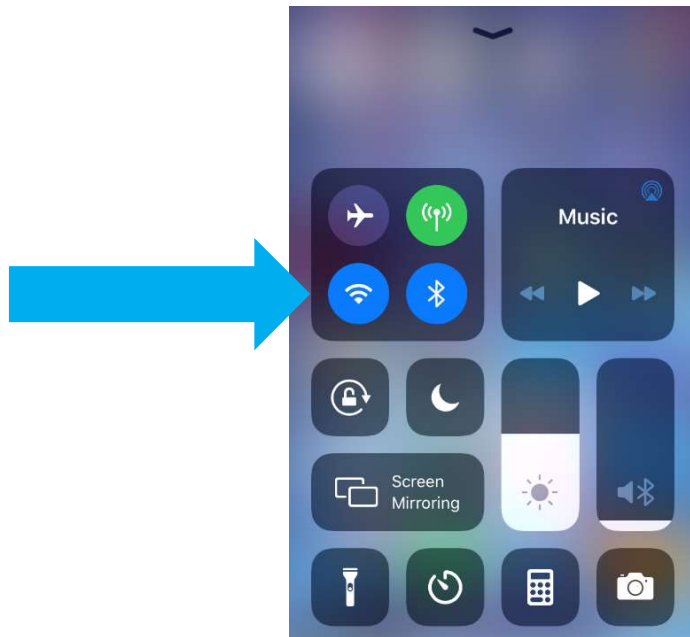
“My calls are intermittent”



Intermittent call quality

Patient reports intermittency during the call, try the following:

- Disable the nearby Wi-Fi



Hearing aids are cutting in and out iPhone

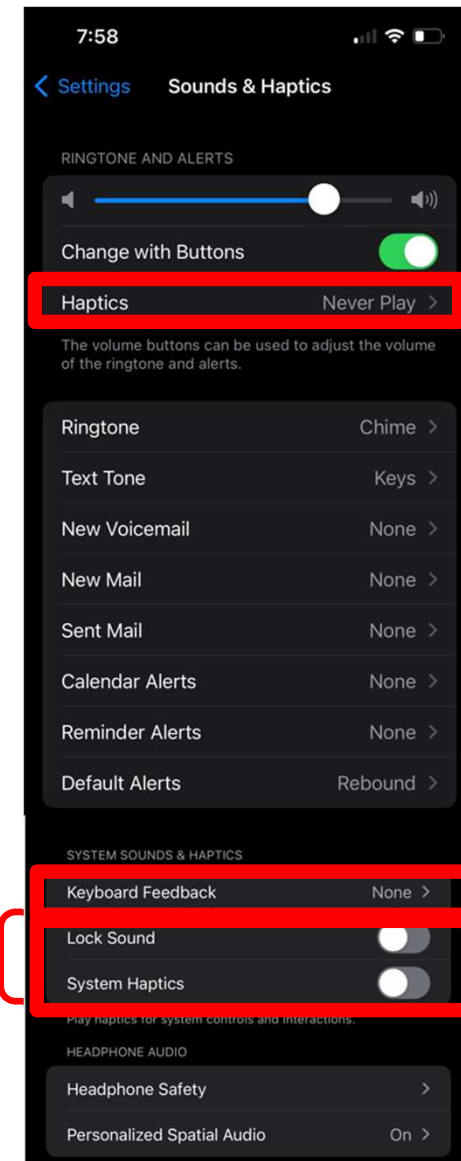
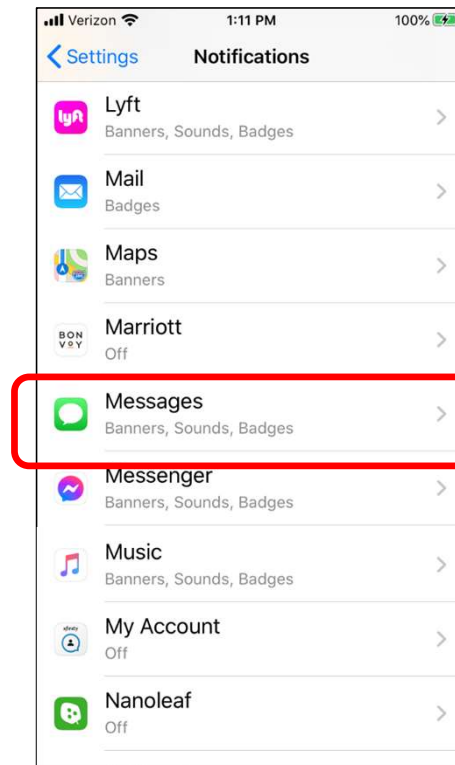
Event-driven system sounds can trigger the hearing instruments to switch to the streaming programs.

Disable all system sounds:

- Settings > Sounds & Haptics

Disable Notifications:

- Settings > Notifications
- Disable notifications by app (can disable just the sound)



Hearing aids are cutting in and out

Android

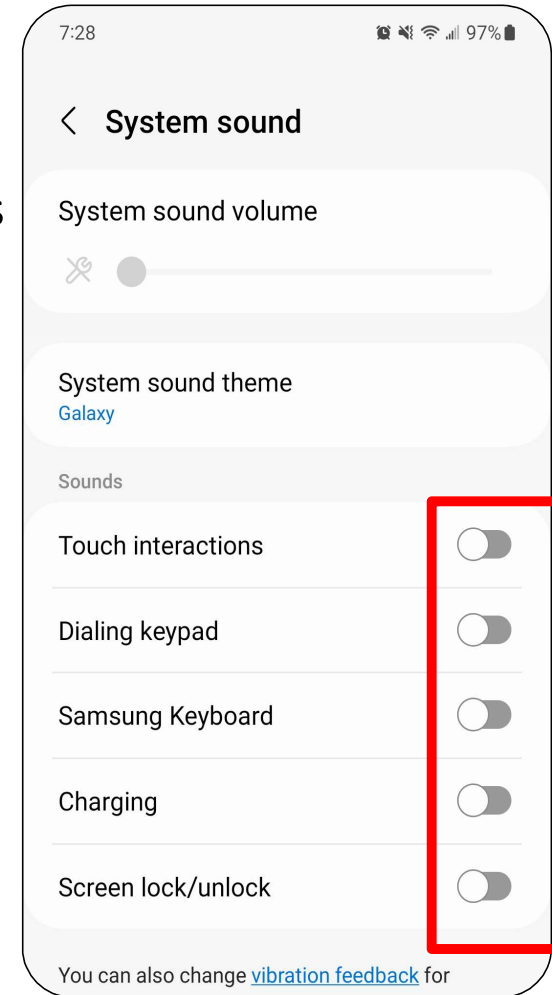
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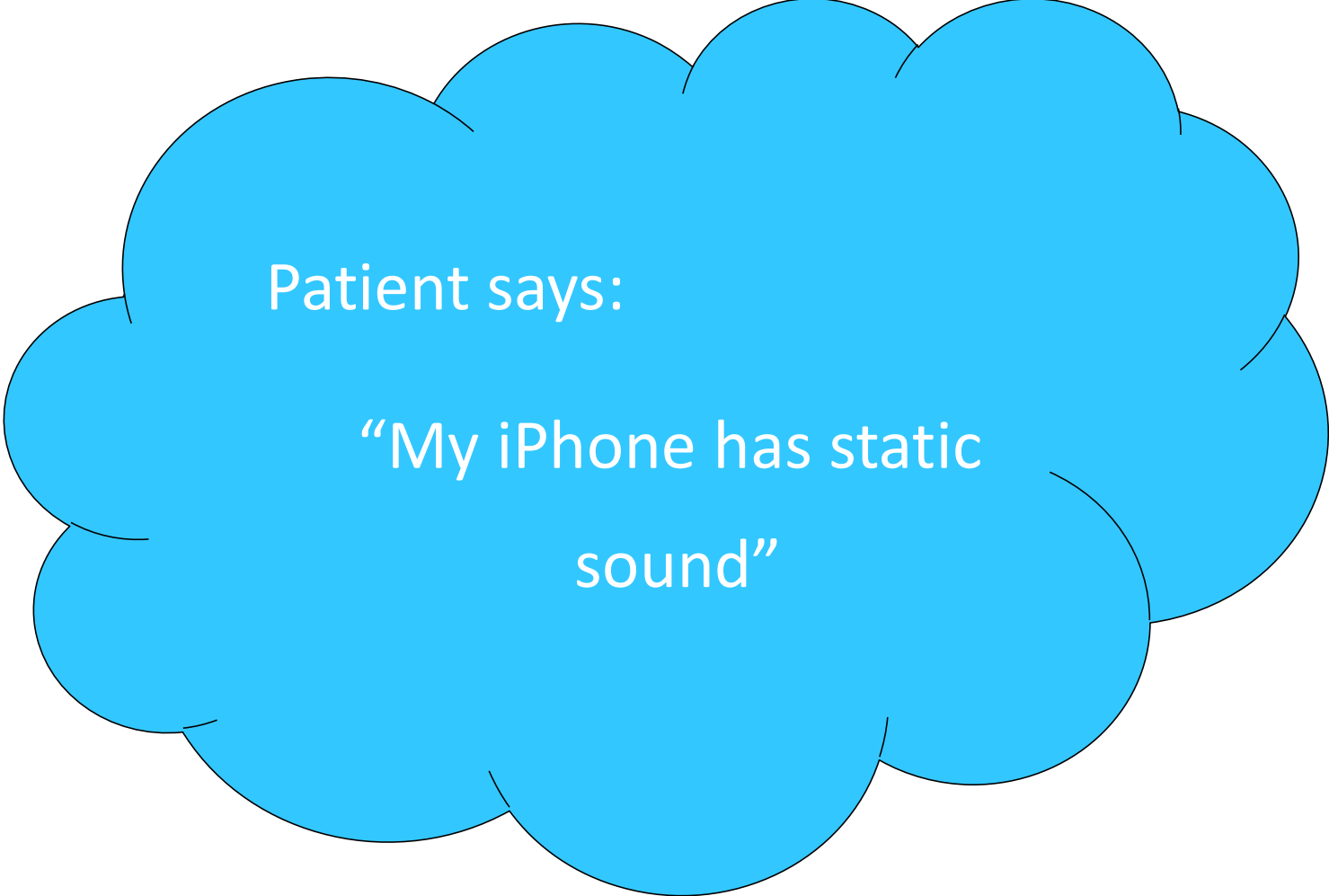
Disable system sounds:

- Settings > Sounds > System Sound

Disable Notifications

- Touch interactions
- Keyboard sounds
- Screen Lock Sounds





Patient says:

“My iPhone has static
sound”

Fixed vs adaptive bandwidth?

Adaptive: has an upload (4kHz)/download (8kHz) frequency range

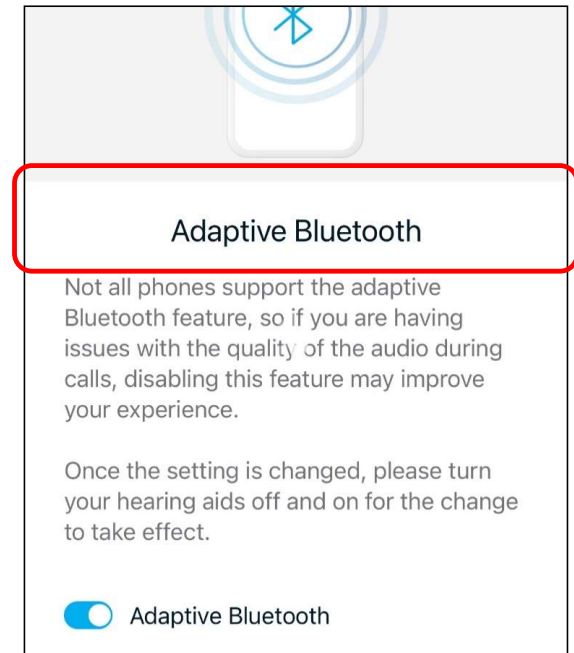
Fixed: has an upload/download (4kHz) frequency range

Majority of phones use adaptive or different upload/download frequency bandwidth = not all phones are the same

Fixed bandwidth tends to be more stable

Call quality - hissing or static iPhone

1. Disable Bluetooth adaptive bandwidth
 - Available in software and/or app



Call quality - hissing or static – iPhone (cont.)

2. Verify iOS is up to date

3. Reset network settings

- Settings > General > Reset > Reset Network Settings
- NOTE: this will also reset cellular network, thus loss of passwords for saved Wi-Fi, VPN and APN settings

If hissing is still present, pair to another phone to see if the issue persists with a different phone

Voice Isolation for iPhone

Requirements: iOS 16.4 or later

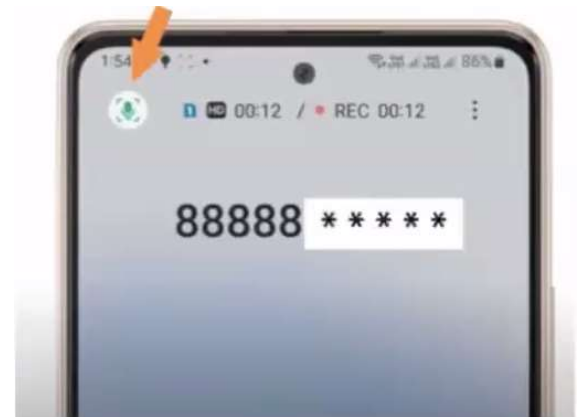
1. During an active phone call access the Control Center (diagonal swipe)
2. Tap Mic Mode
3. Select Voice Isolation option from the list
4. End the call



Voice Focus for Android

Compatible with certain Samsung Galaxy models

1. During an active phone call
2. Tap on the microphone symbol (top left)
 - a) Voice Focus not active = white
 - b) Voice Focus active = green





Patient says:

My phone picks up in the
car and not in my hearing
instruments?"

Call routing

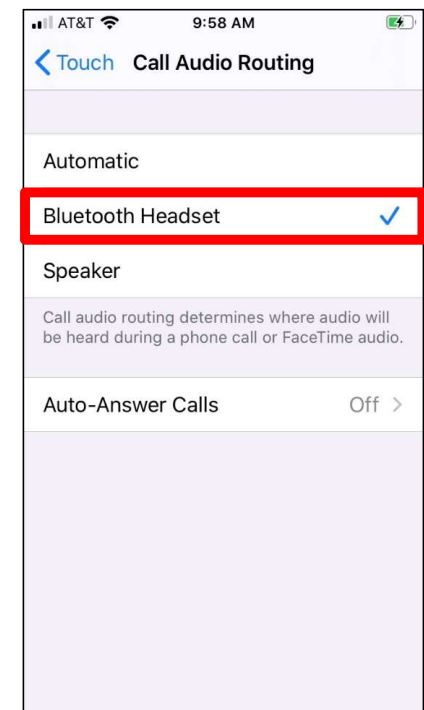
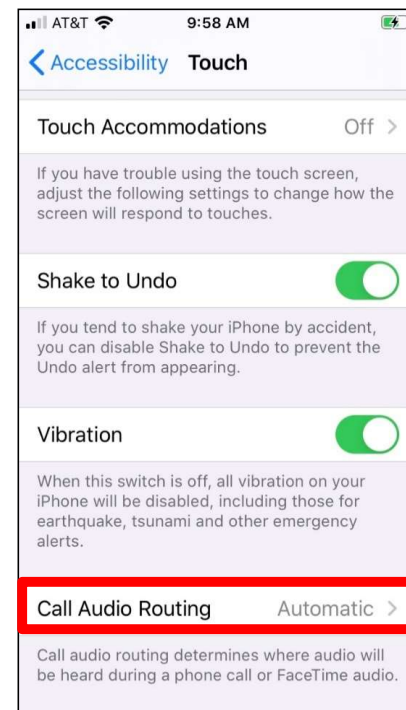
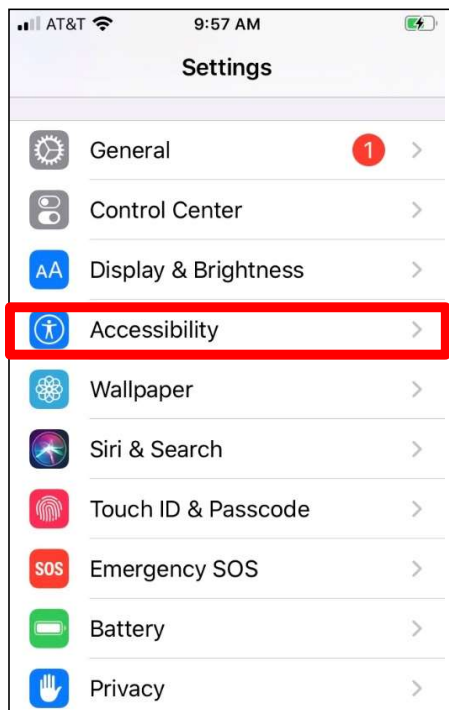
Incoming call audio will route based on how the call is answered:

- Answer the call on the hearing instruments > hear call in the hearing instruments
- Answer the call on the vehicle > hear call on vehicle's Bluetooth
- Answer the call from the phone > hear call on the phone's handset

Changing call routing

To change call routing to always route to the hearing instruments for iPhones:

Settings > Accessibility > Touch > Call Audio Routing > Bluetooth Headset





Bluetooth transmission facts

Various regulatory bodies set up rules for BT strength transmission are designed for body worn devices.

Hearing aids are designed to transmit over short distances

Powered with Li-ion or ZnA which limits the amount of power produced

Hearing aid transmission strength is several orders of magnitude smaller (than cellphones)

Recommended cautionary around pacemakers if transmitting same frequency (2.4 GHz band)

If reporting unexpected behavior, please include:

Hearing aid

Model

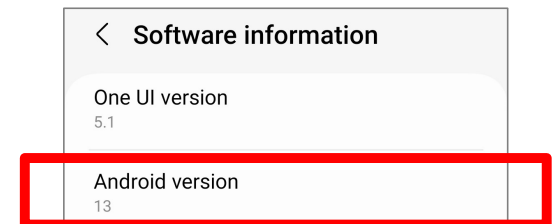
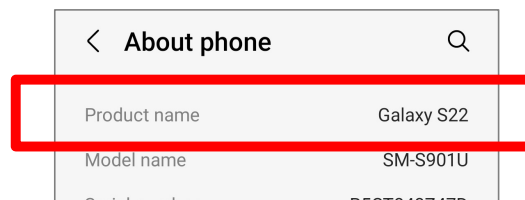
Firmware version (if possible)



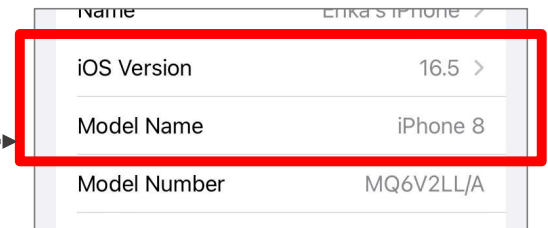
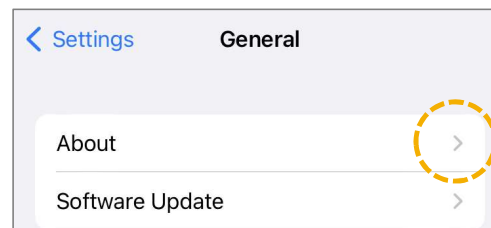
Phone

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

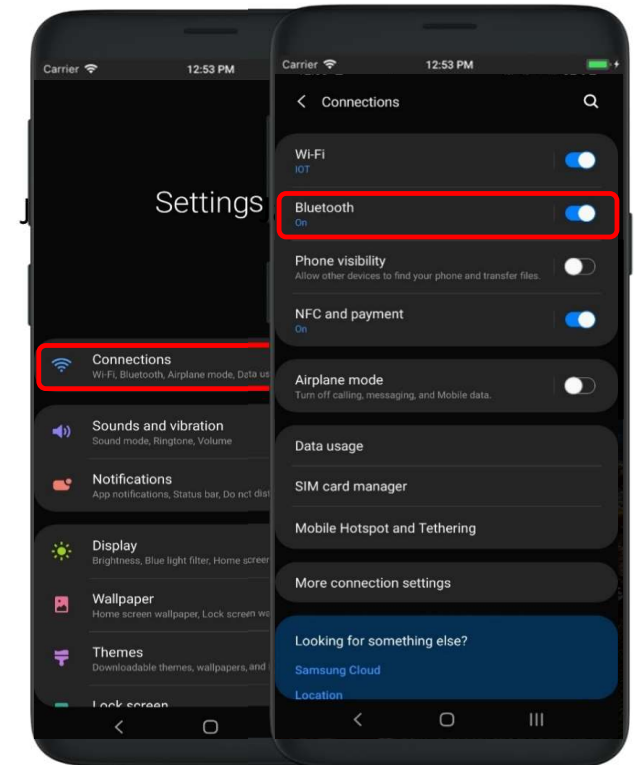
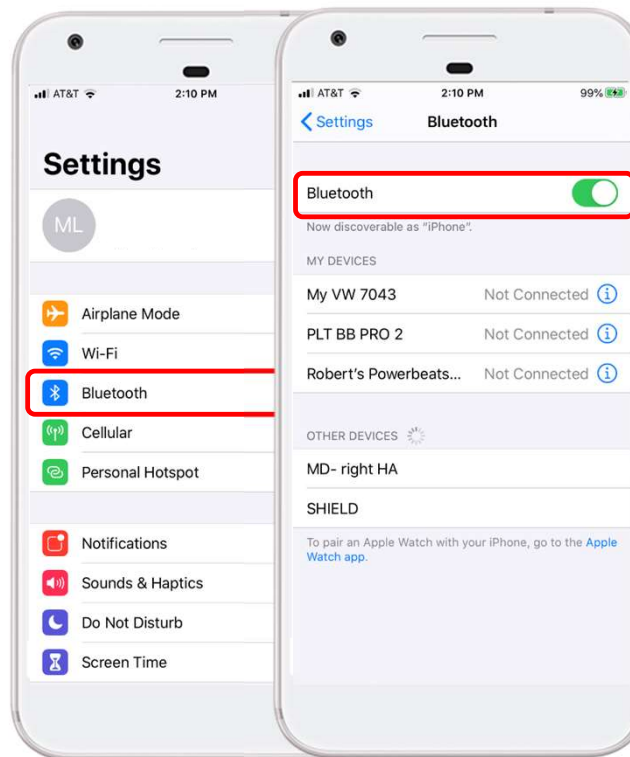


Daily recommendations for connectivity

- Power down the phone daily (full restart)

AND/OR

- Disable and enable Bluetooth daily from Settings



Resources & support

Unitron Account Representative

Unitron Clinical Trainer

Unitron Audiology Tech Support team

Consumer hotline

**“So...
how do you feel about
Bluetooth now?”**



