

A New Standard In Connectivity That Will Make A Difference For Hearing Aid Users

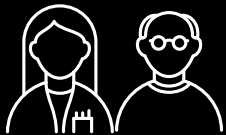
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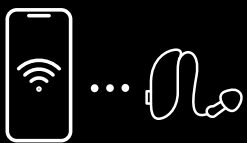
Connectivity is important for patients, but frustrating for hearing care professionals...



Connectivity is among the top 3 key satisfaction drivers when using hearing aids¹



Hearing care professionals connect daily +50% of their patients to their smartphones²



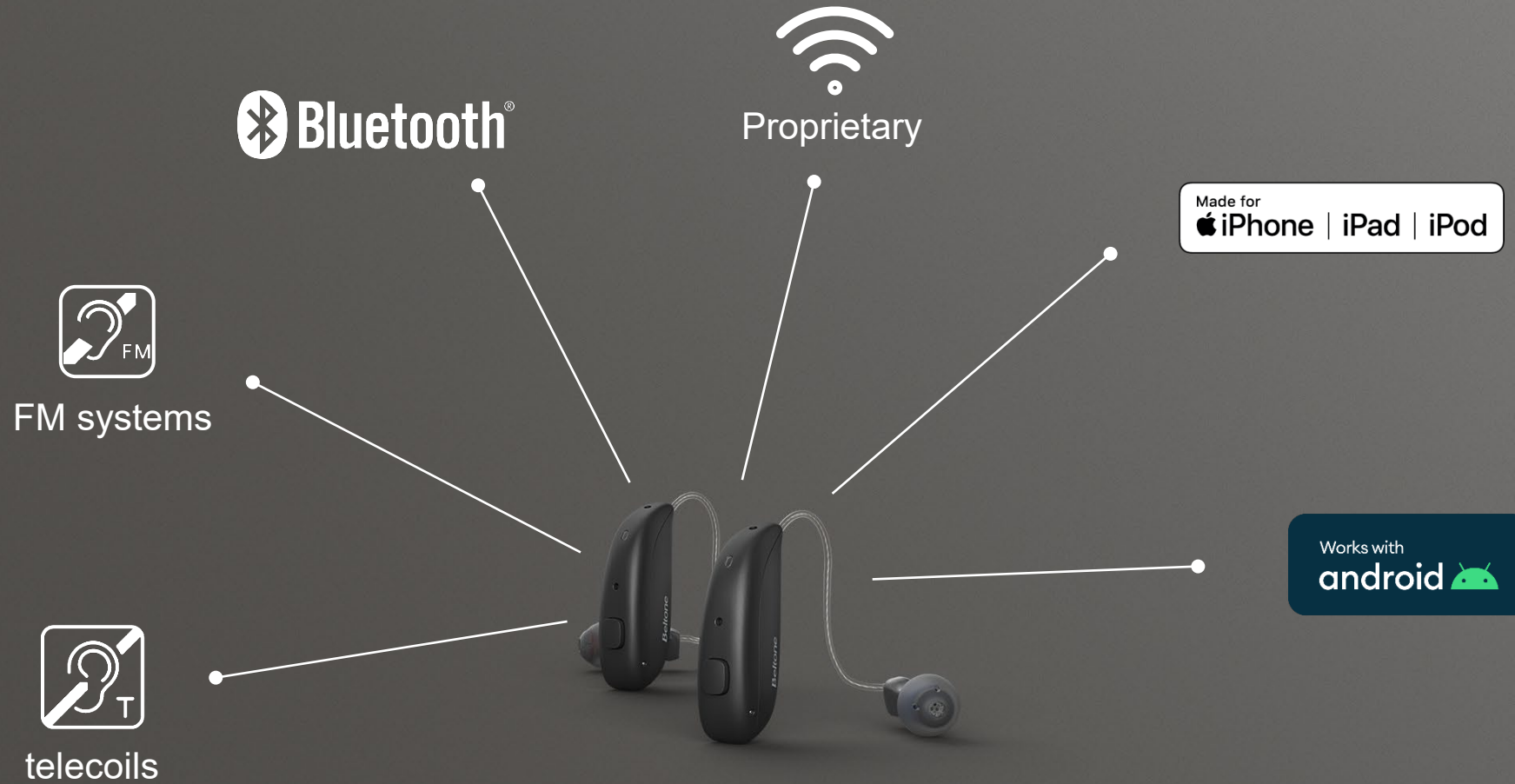
Most hearing care professionals experience frustrating challenges with connectivity and prefer not to recommend it to their patients³

1. MarkeTrak 10, 2019

2. Audiologist Survey | Jan 2020, US Study, n = 225 HCPs

3. HCP interviews in US, UK & Benelux

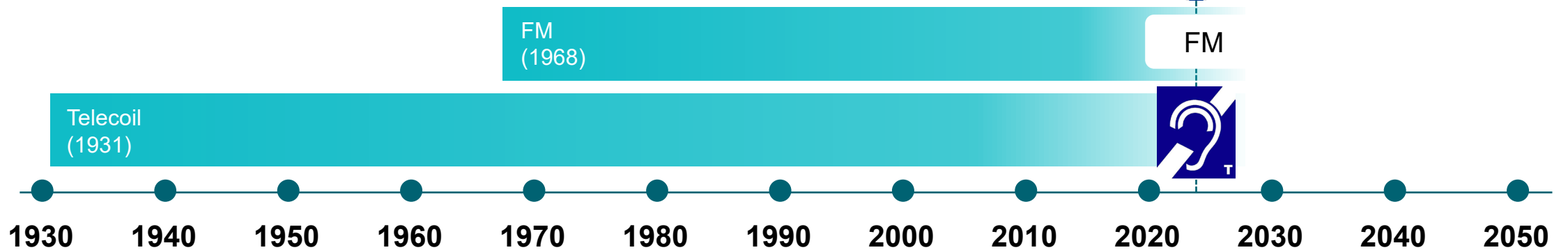
The frustration is not surprising.....



Current landscape

Did you know?
 Bluetooth LE Audio is expected to be the preferred audio standard for wireless communication in electronic devices for the next 20 years

- Digital (2.4GHz)
- Analog



Today

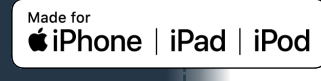
Bluetooth LE Audio (2020)



Android Streaming for Hearing Aids (2019)

ASHA

MFi (2013)



Bluetooth Low Energy

Proprietary protocols (2010)



Classic Bluetooth (1999)



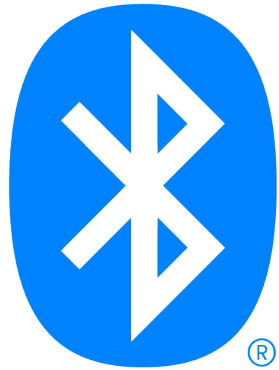
FM (1968)

FM

Telecoil (1931)



Bluetooth SIG, Inc.



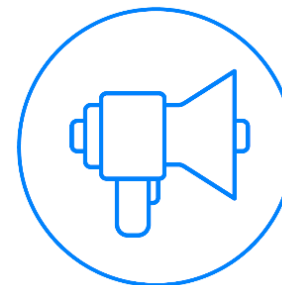
Global trade association established in 1998
Oversees Bluetooth[®] technology and brand
Over 38,000 member companies in 150 countries
Over 5 billion devices shipped each year



Specification



Qualification

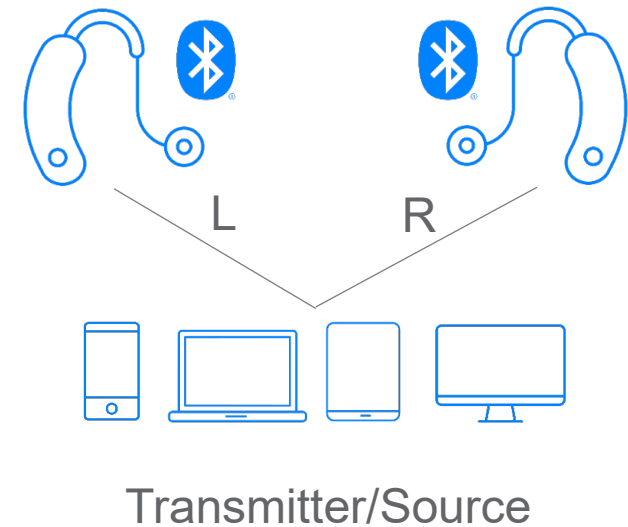


Promotion

The Solution: Standardization

Standardized Bluetooth LE Audio protocol

- New standardized profile for hearing aids (HAP)
- Better performance (quality, latency, power)
 - Low energy radio
 - New modern codec
 - Multi-streaming / binaural
- True, global interoperability
- More selection, choice, and accessibility



Benefits of Bluetooth LE Audio



Improved Codec

Richer sound quality

Lower latency

Lower power consumption



Multi-stream

Connect to multiple devices simultaneously

Two-way communication: makes possible hands-free calls* in Android phones



Broadcasting and audio sharing

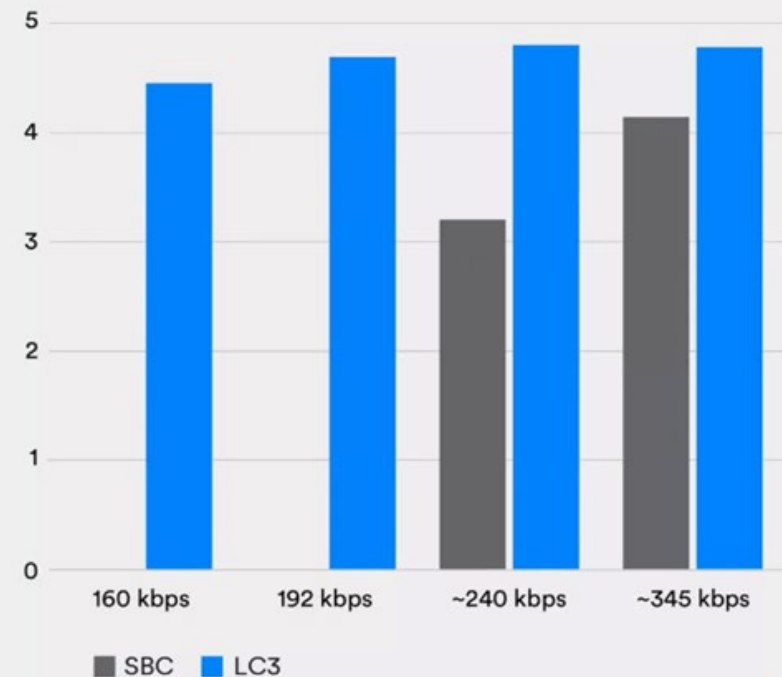
In personal electronic devices and public places

Better Sound Quality

Improved streaming audio quality at a lower bit rate

- LC3 codec will be compressing the audio
 - The degradation of audio quality will be imperceptible
 - Lower latency than any other form of Bluetooth®

Bluetooth Codec Comparison Standard Stereo Listening Test



Source: Bluetooth SIG study based on ITU-R BS.1116-3



Auracast will make the world more hearing friendly and accessible for everyone



Share your audio

Shared listening and watching from your personal device



Hear your best

Public address and assistive listening



Unmute your world

Public TV watching

Made for Bluetooth® Low Energy Audio and Auracast™
A new era that will make the world more hearing friendly
and accessible for everyone



Choose language at
the theater



Conference venues



Public transport



Any TV you want



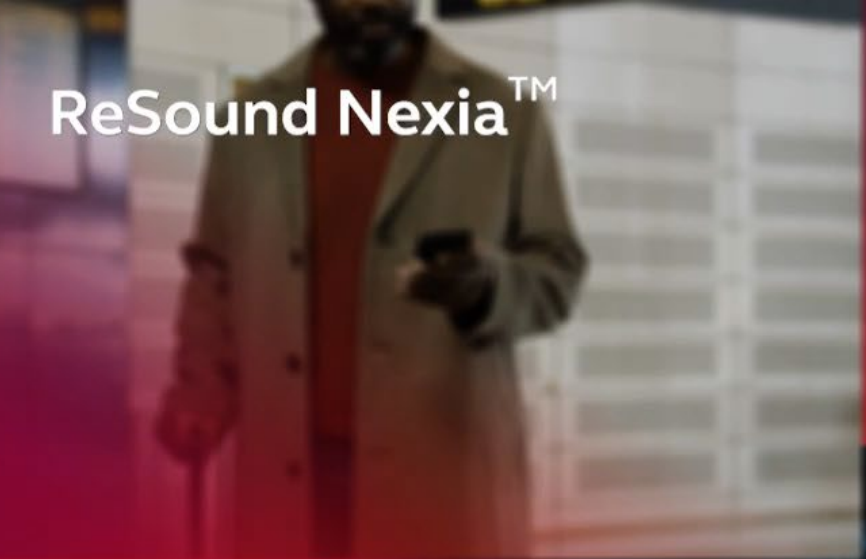
Electronic devices



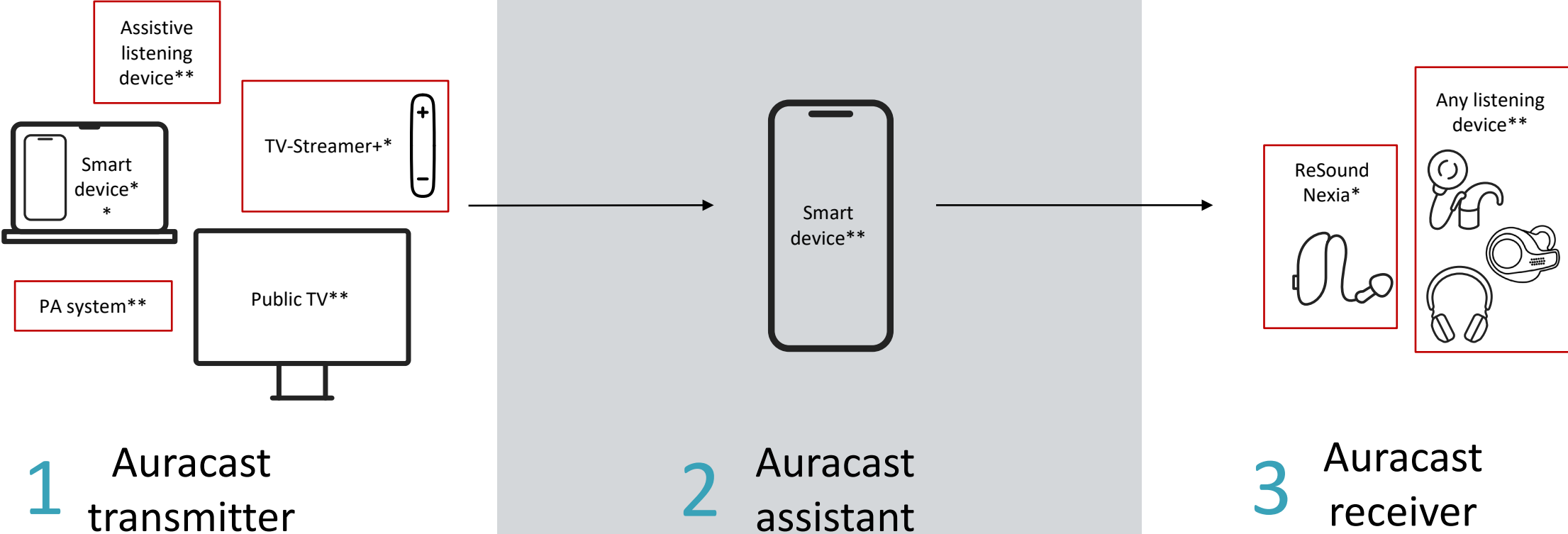
Airports

ReSound Nexia™

ReSound GN

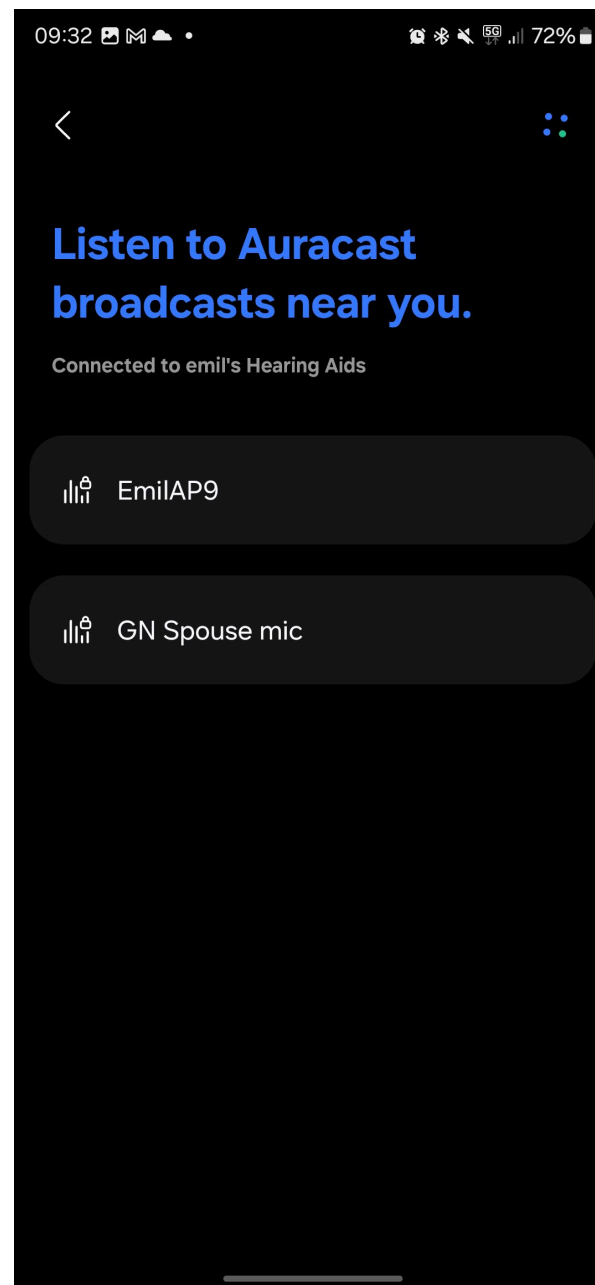


Easy to join Auracast



*Available and Auracast-ready now
**As technology becomes compatible

Samsung Auracast Assistant



TV Streamer +



New TV-Streamer+

Top-rated for clear TV streaming

Improved speech understanding of sound
streamed from TV compared to not using TV
Streamer in different scenarios



TV-Streamer+

Methods: Test participants

Test participants

15 participants with moderate-to-severe hearing loss

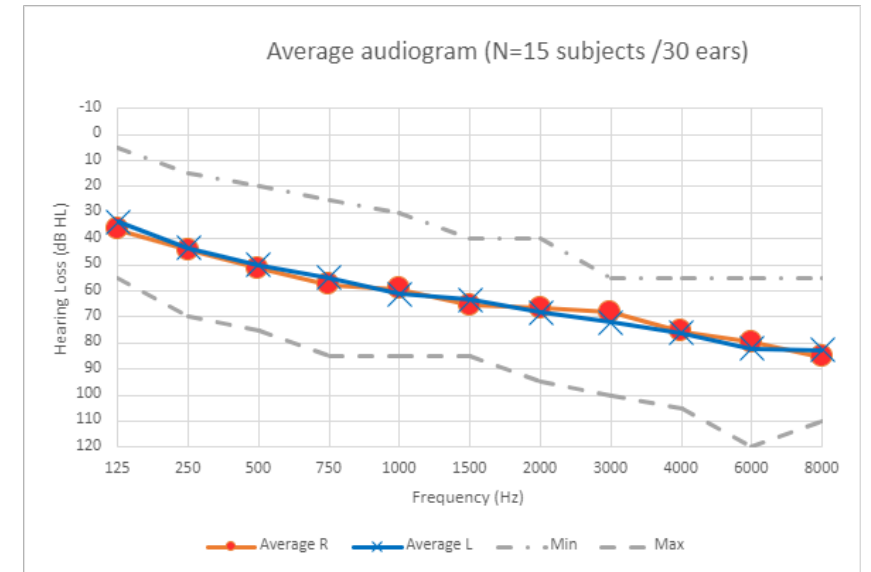
Experienced hearing aid users

Hearing aids

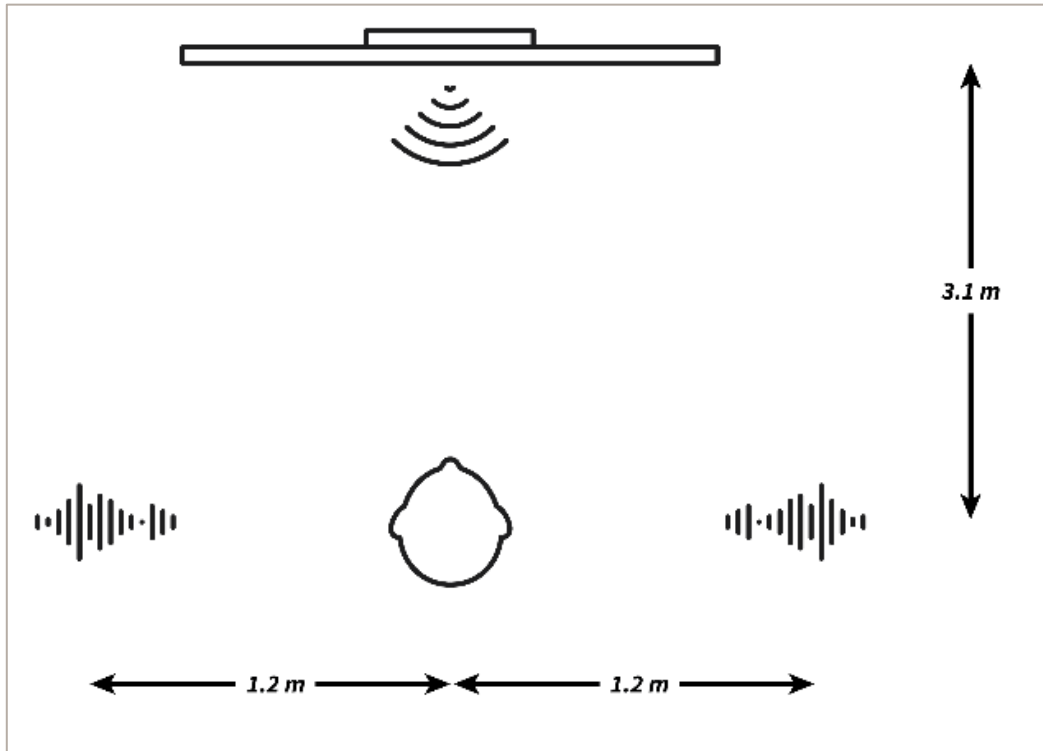
ReSound Nexia™ rechargeable micro (RIE) hearing aids

Appropriate power receiver (MP or HP) and power domes

Gain prescription based on the proprietary Audiogram+ fitting rationale for experienced users.



Methods: Test conditions, material, and setup



Test conditions:

TV with soundbar

TV-Streamer+

Domestic background noises:

“vacuuming” (HA mics unmuted & muted)

“cooking”

“people talking”

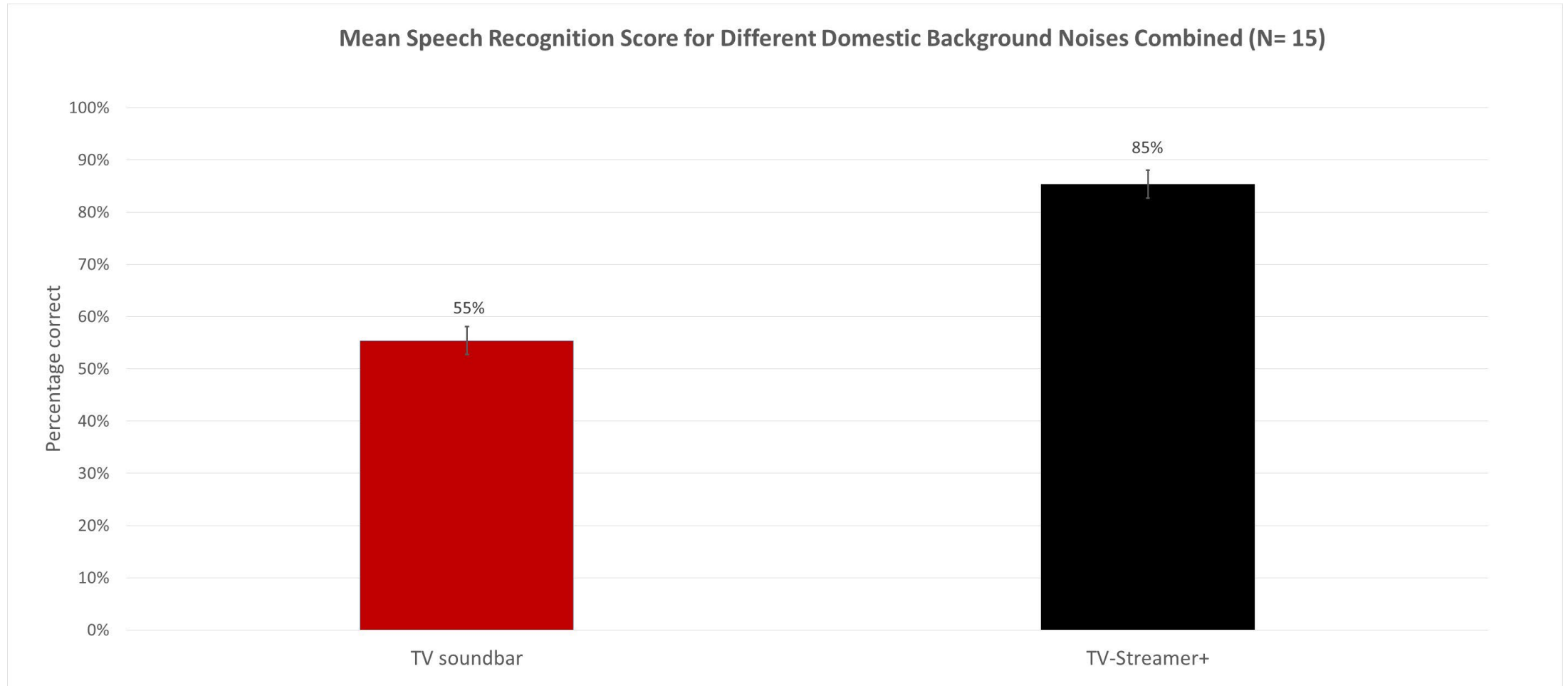
“kids playing” (HA mics unmuted & muted)

“quiet”

Test material

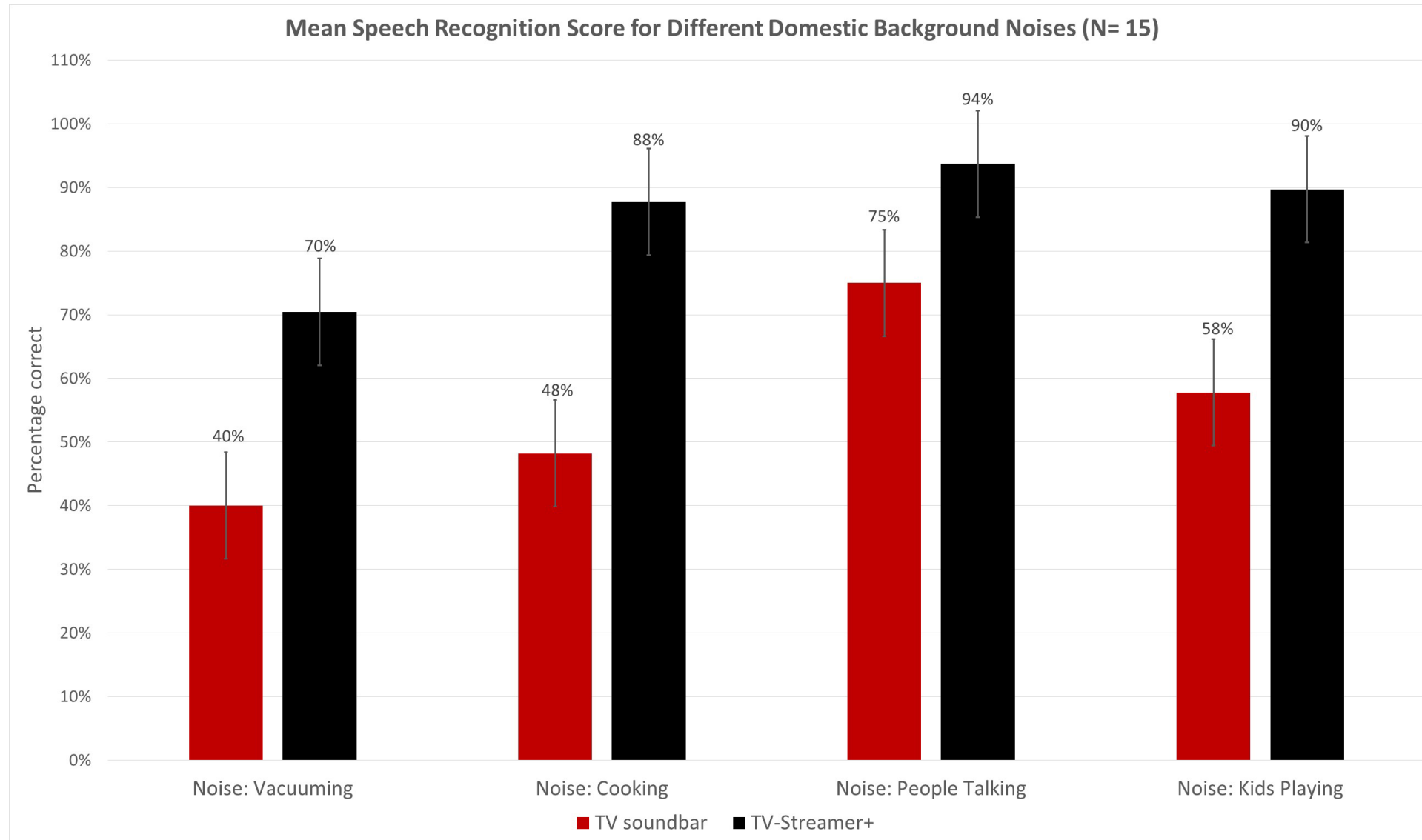
Percent correct speech from TV soundbar and streamed from TV Streamer.

TV-Streamer+ Results



It is important to note that, with the hearing aid mics active, participants could hear the competing noise. The benefit demonstrates a significantly improved Signal-to-Noise Ratio for the streamed TV signal without isolating the hearing aid user from their surroundings.

TV-Streamer+ Results

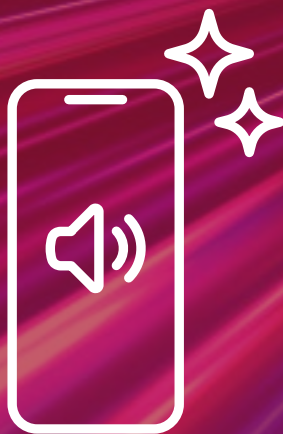




TV-Streamer+ Benefit Test

85% mean speech
recognition score*

Clearest all-day streamed sound with Bluetooth® LE Audio & Auracast™



Clearest Sound
Quality *



Lower battery
consumption*



Lowest Latency*

Source: Bluetooth SIG, *compared to classic bluetooth

What's new?

Microsoft - Windows 11

Windows 11 now supports hearing aids equipped with Bluetooth LE Audio technology so hearing aid users with BTLEA hearing aids can directly pair hearing aids with Windows 11 PCs with BT 5.2 or later.

Intel

Intel® Evo™ platform



Creative Labs

TV Sound Bars and Headphones



JBL

JBL's Xtreme 4, Clip 5 and Go 4 portable speakers that were also announced at CES and are expected to go on sale from mid-March

Ampetronic

Releasing a public use Auracast Transmitter this month

USB Already Available for Computers to Convert to BTLEA



“Hearing loss people aren’t set apart from others, now others are a part of the hearing community”

Richard Einhorn, 2023

American composer; contemporary classical music

ReSound Nexia

Next-era Hearing



Top-rated for hearing in noise.
Smaller than ever. Ready for
Auracast™. And...

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