

Today's Hearing Aids

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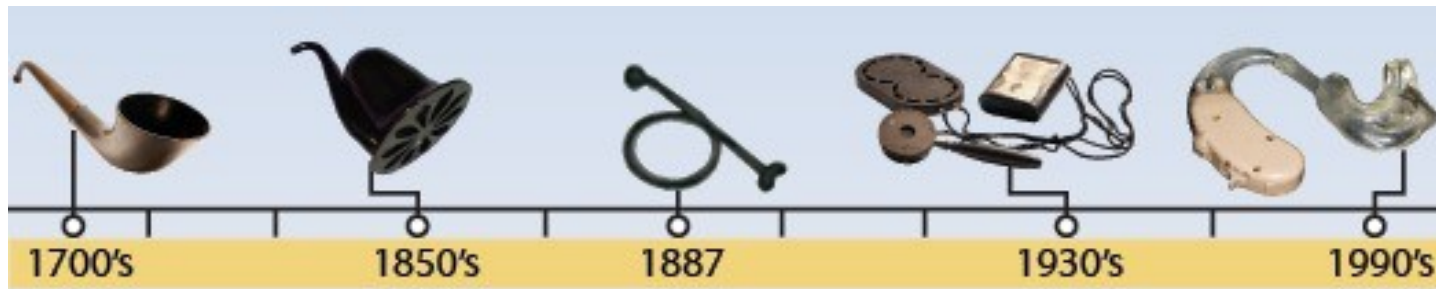
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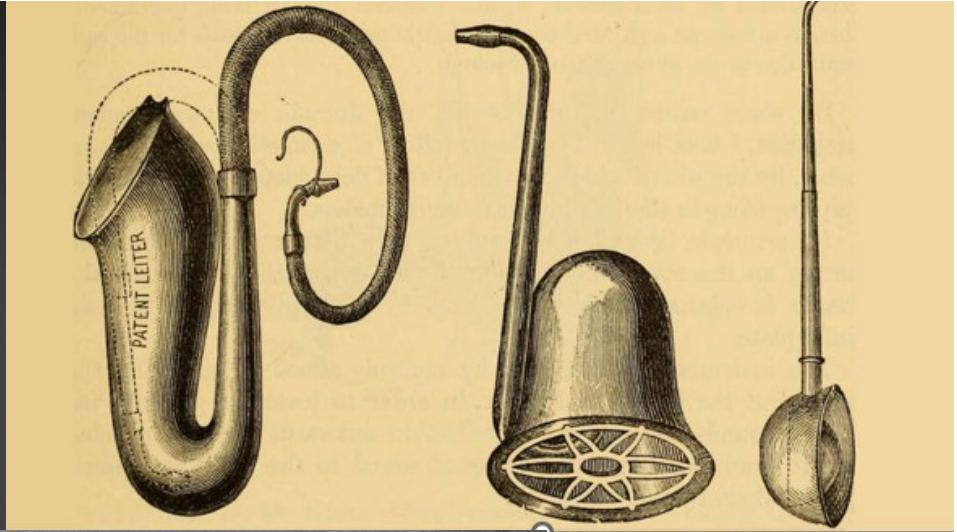
Outline of Today's Talk

- Disclaimer
- A little history
- Major Players
- Consumer Reports
 - Retailers
 - Brands
- Over the Counter
- YouTube videos
 - Dr. Cliff is a Phoenix Arizona-based audiologist
 - Dr. [Matthew Allsop is a **London-based audiologist**](#)
 - Brian Hearing Club
 - Hearing Tracker Forum
- My experience
- Conclusions

The history of hearing aids

- **13th century to 19th century:** From animal horns to ear trumpets.
- **19th century to 20th century:** The first electronic hearing aids.
- **1921–1952:** Vacuum tube technology.
- **Mid-20th century:** The transistor.
- **Late 20th century:** Analog to digital.
- **21st century:** High tech and new horizons.





The First Electric Hearing Aids

Through Alexander Graham Bell's 1876 invention of the telephone, the first electronic hearing aid was close to reality. The telephone had technology that could control the frequency, distortion, and loudness of sounds, which are essential components of a hearing aid.

In 1898, Miller Reese Hutchison created the first electric hearing aid that used electric current to amplify weak signals. In 1913, hearing aids were manufactured commercially and pushed into the market. However, these devices were cumbersome and not portable.



Major Hearing Aid Manufacturers

- **Sonova Group** – Brands: Phonak, Unitron, Hansaton, **Sennheiser**
Advanced Bionics (cochlear implants)
- **WS Audiology** – Brands: Signia, Widex, **Rexton**, Audibene
- **Starkey Hearing Technologies** – Brand: Starkey
- **Demant Group** – Brands: Oticon, Bernafon, Sonic, Maico, **Philips**
- **GN Hearing** – Brands: ReSound, Beltone, Interton, **Jabra**
- **Cochlear Limited** – Specializes in cochlear implants

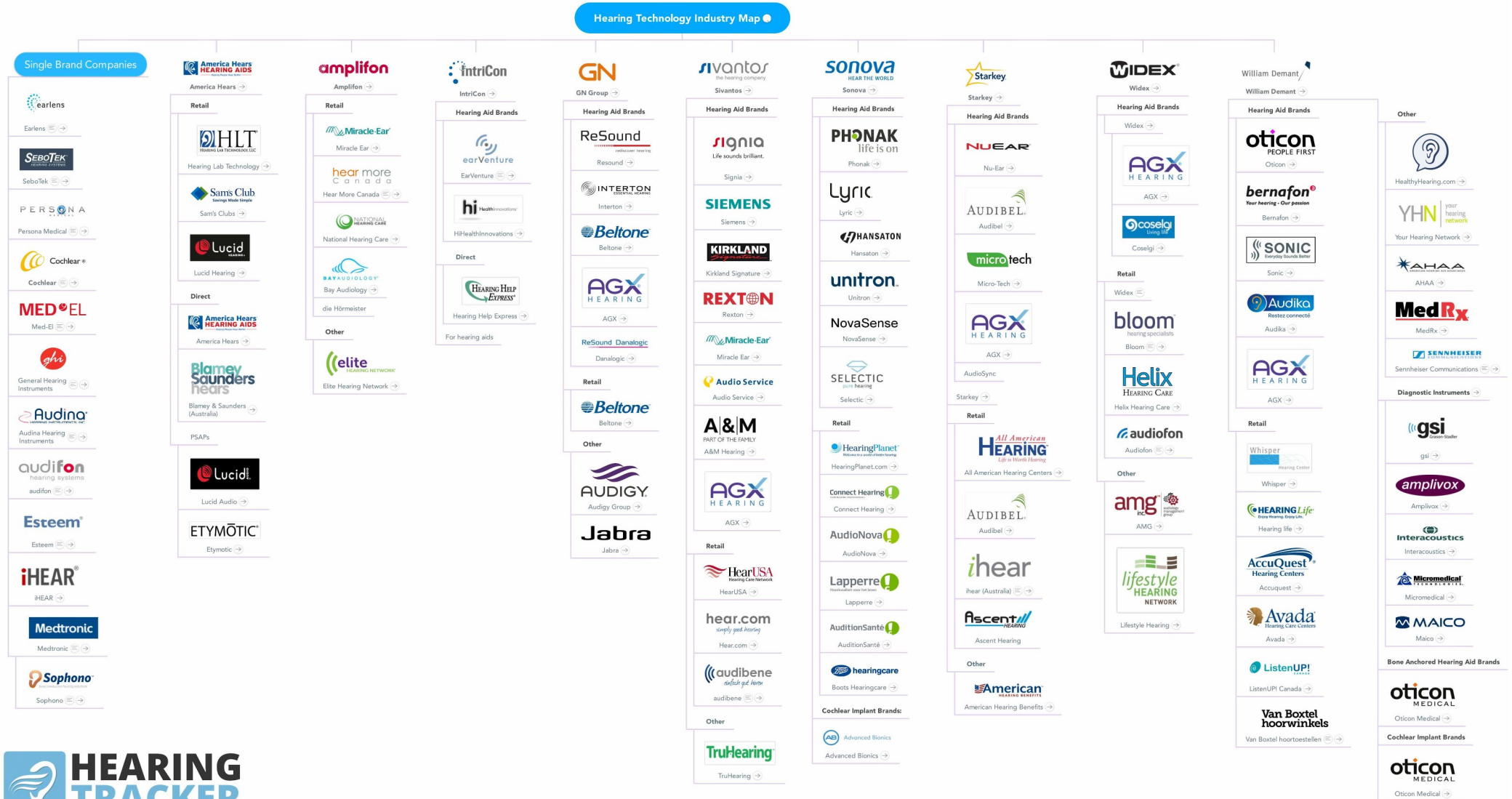
Over-the-Counter Hearing Aid Act of 2017

- (OTC Hearing Aid Act) was a law passed by the 115th [United States Congress](#) as a [rider](#) on the FDA Reauthorization Act of 2017.
- It created a class of hearing aids regulated by the [Food and Drug Administration](#) (FDA) available directly to consumers without involvement from a licensed professional (like an [audiologist](#), [otolaryngologist](#), or [audiometrist](#)).
- Regulations for this new class of hearing aid were released at the end of 2020.

Flood Gates Opened since 2017



From 6+ to Many



Consumer Reports

Best and Worst Hearing Aid Brands

The best hearing aid brands—whether prescription or over-the-counter—deliver reliability, comfort, and value, according to our members



By **Catherine Roberts**

Senior Multimedia Content Creator, Health

Updated by Justin Krajeski · Updated March 16, 2025

<https://www.consumerreports.org/health/hearing-aids/best-and-worst-hearing-aid-brands-and-retailers-a1115767262/>

YouTube videos

- Different Types of Hearing Aids
- Dr. Cliff
- Hearing Club
- Hearing Tracker Forum

HEARING AIDS: TYPES AND HOW TO CHOOSE THE RIGHT ONE.

HD



https://www.youtube.com/watch?v=VPWEp_VxFTQ

Dr. Cliff: How to Choose



<https://www.youtube.com/watch?v=4ajwluVz1Oc>

Costco's Hearing Aids



<https://www.youtube.com/watch?v=v4vhgWbEoVY>

Hearing Club: Best OTC Hearing Aids



<https://www.youtube.com/watch?v=NsiEOSiMyRo>

New Technologies

- Artificial Intelligence
- Gyros
- Lithium Batteries (rechargeable)
- Bluetooth
- LE Audio
- Auracast

What role does AI play in Hearing Aids

- AI technology is used in hearing aids to **analyze and process audio signals in real-time**.
- This allows for intelligent volume control,
- Preference settings for specific sound environments, and
- Personalized sound adjustments based on individual user preferences.
- AI hearing aids utilize machine learning algorithms and deep neural networks.
- They can detect your environment and learn your preferences for listening.
- Deep Learning

Use of Gimbels - gyros in Hearing Aids



Batteries

- 2/3 HA's use rechargeable batteries
 - Many HA's only use rechargeable batteries
 - They last many years, to replace most have to be sent to the manufacturers
 - They last about 20 hours before a recharge is needed
- 1/3 HA's have non-rechargeable
 - 312
 - 313
 - These can be purchased at CVS, etc.
 - They last about one week
 - Costco has best price

LE Audio

- Bluetooth LE Audio is the latest addition to the scores of [Bluetooth standards](#), and
- This new feature aims to bring higher quality, seamless listening to devices while also dropping battery use.
- It's designed for a hyperconnected future where we no longer rely on just our smartphones, laptops, or other similar devices — but on lots of different devices, all at once.
- AND will allow you to receive AURACAST

 **Bluetooth[®]**
LE AUDIO
EXPLAINED!


DrCliffAuD



<https://www.youtube.com/watch?v=OUHCdlnQekU>



<https://www.youtube.com/watch?v=7SXJ6xIUkfc>

My Experience

- I have mild to moderate hearing loss
- I wore Hearing aids for over 10 years (Kirkland from Costco)
- I had an appointment with an otolaryngologist (ENT)
 - Received an audiogram
- I went to a audiologist clinic
 - Obtained Phonak L-30 \$2,400
 - Returned
- I purchased OTC Phonak L-90 \$2,500
 - Returned
- I purchased Philips 9050 from Costco \$1,599
 - Returned after 2 months
- I purchased Elehear \$379
 - Love them since I can stream from my iPhone and Windows 10 PC, ZOOM etc
 - Excellent support
- I will probably buy a more expensive HA's but waiting for AURACAST to be available in less expensive models