THE WORLD'S ONLY THIRD-PARTY SOURCE OF HEARING AID COMPARISONS

$5.50 US/CAN £6.99 UK

2014 CONSUMER'S GUIDE TO HEARING AIDS

19th ANNUAL EDITION

SMART FEATURES | WIRELESSLY CONNECT | OPEN FIT DESIGNS | PROGRAMMABLE IICs | AUTOMATIC MICS | IMPROVED SOUND

WIRELESSLY CONNECT

to your music, TV, phone and more

CONSUMER'S CHOICE:

Why Fit & Go Models Delight Wearers

NEW TRENDY STYLES:

Virtually Invisible When Worn!

FEATURE COMPARISON OF OVER 350 NEW HEARING AID MODELS

Your local hearing clinician is dedicated to helping you and your family hear and understand better. They take great pride in offering you the widest selection of hearing aid brands, shell styles and technologies.

You are cordially invited to call today for a hearing check-up. This is the first step in overcoming a hearing problem. On your visit, you will find a staff that is knowledgeable regarding all types of clinical hearing conditions. They will be happy to answer any questions you may have, without pressure or obligation to buy.

You will also find a facility equipped with the newest hearing evaluation technology. For you, this means a prescription for a hearing aid circuit which is custom-programmed to your hearing problem.

This book, the Consumer's Guide to Hearing Aids, categorizes hearing aids according to the different levels of technology (see Pyramid of Technology on page 3), ranging from products on the lower end of the price spectrum which use entry level digital electronics, to products that cost more and use the newest premium digital technologies. Prices shown are MSRP averages and will fluctuate depending on the region in which you live.

If you are concerned about your hearing, please accept this offer to have your hearing checked.

29 Get in the Clarity Loop With T-Coils

22 Invisible Hearing Aid Comparisons

What To Expect From Your Hearing Aids 4
F.A.Q.s About Hearing Aids 6
Hearing Aid Shell Styles 8
Why Fit & Go Models Delight Wearers 9
Digital Hearing Aids 10
Entry Level Comparisons 11
Hearing Aid Battery Basics 12
Why Do You Hear Better With Two Ears? 13
Basic Level Comparisons 14
Wireless Means Easy Listening 17
Advanced Level Comparisons 18
Hearing Aids Or Surgery? 21
Invisible Hearing Aid Comparisons 22
Premium Level Comparisons 24
How Custom Hearing Aids Are Made 27
Do You Hear But Not Understand? 28
Get In The Clarity Loop With T-Coils 29
Types Of Hearing Problems 29
Definitions Of Hearing Aid Terms 30

On the Cover

A. Oticon - Alta
B. Audibel - A2 Wireless
C. Beltone - Prime
D. Phonak - Virto Q-Nano
E. Audina - FLX 6
F. Siemens - Insio

This publication receives no funding from hearing aid manufacturers or component manufacturers. The information provided in this Guide is designed to support, not replace, the relationship that exists between the patient and the hearing care professional.

Cover Image: © Unlisted Images / Fotosearch.com

PYRAMID OF TECHNOLOGY

Premium Digital	*Multiple channels, fully automatic digital algorithms, adaptive, connectivity options*	**$4200 & Up** *(each)* *p.24-27*
Advanced Digital	*Multiple channels, some digital algorithms which the user may have to activate*	**$2800 & Up** *(each)* *p.18-21*
Basic Digital	*Single or multi channel, without any advanced features*	**$1800 & Up** *(each)* *p.14-17*
Entry Level Digital	*Set by potentiometer only, may be adjusted for output, gain, and more*	**$1000 & Up** *(each)* *p.11-12*

What to Expect from Your Hearing Aids

If your hearing loss has progressed to the degree that you need hearing aids, ***a critical factor in their success is your understanding and acceptance of realistic expectations of their capabilities.*** Hearing instruments, regardless of brand or type of technology, can never replace normal hearing in all listening situations. ***Here are some guidelines which should help you and your provider agree on a set of realistic expectations for you.***

• The extent to which the lost hearing function can be restored through amplification is based on the severity and duration of your hearing loss. The degree and extent of hearing loss is determined using calibrated equipment called an audiometer.

• The more severe your hearing loss, the more sophisticated the hearing aid must be to enable you to hear more clearly.

• Crowded social gatherings and restaurants are examples of noisy conditions where even a person with "normal hearing" has trouble hearing conversation. As a person's hearing deteriorates, so also does the ability of a hearing aid to correct for hearing loss in these types of situations. Your provider's goal is to select an appropriate circuit for your hearing aid that will deliver a natural loudness throughout your entire listening range without getting too loud or too quiet.

• In difficult listening situations normal hearing listeners rely on speech reading cues and focus their attention on the speaker. These listening skills are even more important for the hearing aid user when faced with these circumstances.

• In quiet, many hearing aid users can achieve a performance level equal to normal hearing. But as the difficulty of the listening task increases, the gap between a person with normal hearing and a person with hearing loss widens. The more severe the hearing loss, the wider the gap.

Expecting results that cannot be achieved will only lead to frustration and dissatisfaction.
If you know what to expect, you'll be free to enjoy the improvements that hearing aids can make in your life.

• Hearing aids should prevent normally loud sounds from becoming uncomfortable.

• Depending on the degree and severity of your loss, hearing aids may allow you to hear speech more clearly in some noisy situations.

• You'll need time to get used to your new hearing aids and to learn how to achieve maximum performance from them. You should expect to return to your hearing professional for sound quality adjustments.

• With properly programmed hearing aids, you should be able to hear many normal sounds that you may not otherwise be able to hear clearly, such as the voice of your client or the words of a loved one. You may also begin to hear sounds you have forgotten were a part of your world, such as the hum of the motor on your refrigerator or the buzz of your fluorescent lights.

• Hearing aids will not restore your hearing to normal. Science has not been able to match the human hearing mechanism.

• Hearing aids will not "filter out" background noise, despite some advertising claims. Some hearing aids have circuitry and directional microphones that will avoid boosting the volume of some types of background noise, but this may also remove some of the speech you want to hear. This is usually a benefit, however, providing a more comfortable listening experience and better sound quality in some types of noisy situations.

• Hearing aids should allow you to understand speech more clearly, with less effort, in a variety of listening situations.

• Hearing aids should keep others from noticing your hearing loss.

• We have the same goal as you: to help you attain the best possible hearing improvement. We use the best testing equipment science has to offer and dispense hearing aids from many different manufacturers. We pledge to do our best to meet a set of mutually agreed-upon objectives and expectations.

Hearing aids might not have super powers... but they can still make a huge difference in your life.

Take a moment to go through this checklist of signs that you may need hearing aids.

- Your hearing frustrates you when you converse with family or friends.
- Your spouse tells you he or she often has to repeat what he or she has said.
- Your hearing problem has ever caused you embarrassment.
- You have difficulty hearing the television or radio at a normal volume level.
- You feel that hearing difficulties hinder your social life.
- You attend religious services or group activities less often because of your hearing problem.
- It is difficult for you to hear or understand when someone speaks to you in a whisper.
- Your hearing creates difficulties when you visit a restaurant with friends or family.
- You have ringing in your ears (tinnitus) that will not subside.

Hearing Aids: F.A.Q.s

Q. Two of my friends wear hearing aids that look the same, but each friend paid a different amount. Their hearing aids came from the same provider. Why are the prices different?

A. Hearing aid shells look alike, but it's the circuit inside that you are paying for. The least expensive circuits are Entry Level Digital; the moderately priced hearing aids are Basic Digital; the most expensive circuits are Advanced Digital and Premium Digital. When you accept the clinician's recommendation for technology in the Advanced or Premium categories, you are giving your clinician the tools needed to manage your hearing for several years. These hearing aids can be reprogrammed for your hearing loss as it changes.

Q. What causes hearing loss?

A. The majority of hearing losses are a result of aging. Other possible causes are prolonged exposure to loud noises, heredity, certain illnesses, and medications. However, the most common form of hearing loss is called "nerve deafness." This comes about as a result of the fact that the cochlea (inner ear) and auditory nerves do not properly transmit their signals to the brain.

Q. Will my hearing aid amplify loud sounds and damage my hearing further?

A. Your hearing aid will be preset to a safe level of maximum amplification. However, keep in mind that you may have to re-accustom yourself to loud startling sounds as they are amplified by your hearing aid.

Q. How do hearing aids work?

A. Hearing aids fill the gap created by a hearing loss by receiving and amplifying sound. While there are many different types of hearing aid technology, four basic components are common to them all: (1) a microphone, which receives sound and translates it into electrical impulses; (2) an amplifier, which makes those electrical impulses stronger; (3) a receiver (speaker), which translates those now stronger impulses into louder sounds; and (4) a battery, which serves as a power source for the whole system. Hearing aids vary widely in their styles, sizes, and levels of circuit technology. The professional who provided this book will help you choose the hearing aid style and circuitry that is right for your hearing loss and lifestyle.

Q. What should I do if I or a loved one has a hearing loss?

A. The first step should be a professional hearing examination conducted by an otolaryngologist, Clinician, or hearing aid dispenser. This will help to determine the level and type of your hearing loss. The proper treatment with either medical attention or a hearing aid will be recommended. With today's modern technology many hearing losses can be successfully corrected with a hearing aid. However, only about one-fourth of those people who could benefit from the use of a hearing aid actually do so.

Q. What is the difference in various hearing aid circuits?

A. The conventional Class A circuit amplifies each sound equally, while the other types of circuits automatically manage loud sounds and quiet sounds in different ways. The goal of Advanced and Premium digital circuits is to deliver a natural loudness throughout your entire listening range without under-amplifying or over-amplifying the sound.

Q. How common is hearing loss?

A. One of every 10 Americans currently has some degree of hearing loss. For those aged 60 or older, the ratio is almost three in 10.

Q. What sort of changes and adaptations are necessary with a hearing aid?

A. First, you need to understand that it is not possible for a hearing aid to completely restore your hearing. What it can do is enhance sound and thus, allow you to hear better. Since hearing loss is gradual, over the years you may have become unaccustomed to normal environmental sounds such as traffic noise, the hum of a refrigerator or air conditioner, nature sounds, or background conversation.

Therefore, when you begin to wear hearing aids, it is necessary to re-educate your brain to practice selective listening and learn once again to choose only those sounds which you wish to hear and ignore the rest. It is important that you wear your hearing aids as much as possible. This is the best way for you to get used to them and the way that they work. This also helps you to become more skilled at recognizing sound direction, learning what hearing aid settings work best in different situations, and using visual clues in difficult hearing environments.

Patience is the key. Your friends and family can be very helpful in the whole process. Encourage them to speak to you in a normal voice without over enunciating or over emphasizing their lip movements. These people can be very helpful to you as you become accustomed to your new hearing instruments. If for some reason you continue to find the adjustment to be difficult, your hearing professional will be happy to answer any questions which you may have and help you solve any of your hearing-related problems.

Q. What is the best brand of hearing aid?

A. There are approximately 22 worldwide hearing aid manufacturers, each producing exceptional quality products. Which brand is right for you is determined by the results of your audiogram, your lifestyle, your cosmetic requirements and your dexterity. Your hearing professional will select the brand only after selecting the type of circuit best for your individual hearing loss as indicated by your audiogram.

Q. How does hearing loss affect individuals?

A. While each hearing loss is unique, most people share common results from their loss. They often feel isolated from their surroundings. It is often more difficult to meet new people or face new environments. They often complain of appearing incompetent or feeling insecure. Recent studies suggest a link between hearing loss and dementia.

Q. What about the complaints I have heard about hearing aids?

A. It is true that there are several concerns that are sometimes mentioned by hearing aid users. Here are three of the most common.

"My own voice sounds strange."
Hearing aids amplify some or all sounds. This includes the sound of your own voice. With time and use, this should become less noticeable, but if this bothers you, see your hearing professional who can address this problem.

"I have a problem with whistling sounds or feedback."
There are several common causes of this problem, all of which are easily solved. First, your hearing aid may fit too loosely. This allows the amplified sound to escape from your ear and be picked up again by the microphone, thus resulting in feedback. Second, some feedback happens when you are standing too close to a surface that reflects sound, such as a wall. Finally, many feedback problems are simply the result of a hearing aid's volume control being turned up too high. Most feedback problems can be easily remedied by the user. However, if you continue to have a consistent problem with feedback, take your hearing aids in for a check-up.

"I feel pressure in my ear."
Sometimes, excess air can become trapped between your eardrum and the hearing aid. If this feeling persists, your hearing professional can alter your hearing aid to alleviate the problem.

Q. I'm worried how my hearing aid will look. What type of hearing aid should I get?

A. Most hearing aids on the market today are created to be minimally visible. The type of hearing aid that you buy should be based upon your hearing loss, your dexterity, and your lifestyle. Even if your clinician advises that IIC or CIC models are not right for you, it's virtually impossible to notice the RIC and mini RIC models. *To learn more about hearing aid shell styles, see our article on page 8.*

Hearing Aid Shell Styles

Behind-the-ear (BTE) and mini behind-the-ear (mBTE)

In BTEs, the receiver, microphone and amplifier are housed in a shell behind the ear. A clear plastic tube connects the shell to a custom earmold in the ear. A larger shell size allows BTEs to hold more circuitry than other styles. Also, they can be fitted for a wide range of hearing losses, and they tend to be very durable. The mini version of a BTE is simply smaller than traditional BTEs.

Receiver-in-canal (RIC) and mini receiver-in-canal (mRIC)

RICs are similar to BTEs in that the shell fits behind the ear, but RICs are smaller and less noticeable. They have a transmission wire that connects the shell to the receiver, which is housed in a custom earmould or dome-shaped ear bud. This allows for better sound control than a BTE.

In-the-ear (ITE)

ITE hearing aids are custom earmolds with circuitry built in that fill most of the visible portion of the ear. ITEs are best suited for mild to moderately severe hearing losses. ITEs are ideal for those with limited dexterity because of their size and easy-to-use controls.

In-the-canal (ITC)

ITC custom-fit hearing aids are smaller than ITEs and are partially visible in the outer ear. ITC devices are best for mild to moderate losses but can be used by some patients with moderately severe losses.

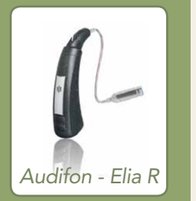
Completely-in-the-canal (CIC)

CIC custom-fit devices fit all the way in the ear canal. They are rarely visible and are therefore cosmetically appealing. Some hearing aid wearers with narrow ear canals may not be candidates for CICs. These tiny hearing instruments are most suitable for mild to moderate losses.

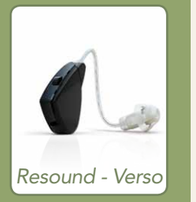
Invisible-in-canal (IIC)

IIC custom-fit devices are similar to a CIC, except they fit deeper within the ear canal. They are not visible at all when worn. Like the CIC, some hearing aid wearers with narrow ear canals may not be candidates for IICs. These tiny devices lower the chances of sound distortion by being positioned closer to the ear drum.

Consumers' Choice!



Audifon - Elia R



Resound - Verso

Rexton - Onyx

Starkey - Xino

Interton - Crisp

Hansaton - Antaro X-Mini

Sonic - Flip

Why Fit & Go Models Delight Wearers

Your eyes aren't deceiving you. If the latest hearing aids look too cool to be hearing aids, that's because the hearing aid industry is emphasizing sound quality ***and*** cosmetic appeal like never before. An entirely new class of svelte hearing aids is being created called Receiver-in-Canal (RIC). These instruments are virtually unnoticeable when worn. They are unique because of a very smart engineering design with remarkable results: *the separation of the receiver (speaker) from the rest of the hearing aid.* The ultra-slim computer processor is worn hidden in the hairline just behind the ear. The receiver rests in the ear canal, secured by a vented silicon tip. A hair-thin transmission wire, not a tube, connects the two. The popularity of RIC instruments has spread quickly by word-of-mouth among Baby Boomers, who in turn are telling their parents… who in turn are telling their friends. Here's why:

1 More Efficient: The receiver is already near your eardrum, so sound doesn't have to travel through tubed plumbing to reach its target. Because of this, less power (volume) is needed.

2 Size & Technology: The space available in a tiny, hidden-when-worn RIC is still greater than a completely-in-canal model, allowing needed space for better digital processing features such as adaptive directional microphones, noise reduction and feedback cancellation. Some models offer FM, Bluetooth, or telecoil for listening wirelessly in public spaces or to devices like TVs and phones.

3 Comfort: The fit and feel of a professionally-fit RIC allows most patients to forget they have them on. The piece that is worn behind the ear fits snugly and comfortably for even the most active wearer.

4 Natural Sound: These instruments are designed not to occlude or "plug-up" your ears; instead a thin vented tip holds the receiver in position, allowing natural sound to reach the eardrum unamplified. More natural sound quality overall and improved own-voice quality is possible with RIC instruments.

5 Reduced Feedback: The increased distance between the microphone and the receiver cuts down on amplified sound re-entering the microphone, which can result in whistling. More volume can be delivered to the ear without feedback, thereby helping patients with greater hearing losses.

6 Repair Easily: Should the receiver need repair, this modular component can quickly be replaced by your clinician, usually while you wait. That means less time without your hearing instrument.

7 Reprogrammable: RIC instruments are flexible and adaptable to changes in hearing loss. They can be repro-grammed by computer at the local hearing aid office to shape the output of the hearing aids should the wearer's hearing change.

8 Cosmetics: RICs are slim, light and beautiful. Instead of a tube, a thin transmission wire slightly larger than a human hair blends with your skin and connects the digital processor with the receiver.

9 Longer Battery Life: Because RIC instruments have more room for electronics than a completely-in-canal model, there is frequently space for a larger battery, resulting in longer battery life.

10 Fit-And-Go: These instruments can usually be selected, fit, programmed and worn home the same day for instant hearing improvement.

Photos: Not all manufacturers' RIC products are shown here.

Photos: Not all manufacturers' RIC products are shown here.

Digital Hearing Aids

6 Important Questions To Ask About Digital Hearing Instruments

1 How many channels does it have? How many do I need?

2 What type of Automatic Signal Processing compression does it use, and what type would best suit my current lifestyle?

3 Does it offer directional microphones for hearing in noise?

4 Does it have wireless capability? Do my listening situations indicate I would benefit from hearing aids with wireless compatibility?

5 How many memories does it have? How many various listening situations do I encounter?

6 Does it come with a remote control? Do I need a remote control?

Fully digital hearing aids process sound mathematically. In place of electronic components, digital hearing aids contain hundreds of tiny electrical parts which are micro-manufactured into a single silicon chip. The computer programmed chip applies continuous digital processing to incoming sound. Here's how these digital hearing aids work:

Five Step Guide:
How Digital Hearing Aids Work

1 *The hearing aid microphone turns sound into an electrical signal.*

2 *A filter removes inaudible frequencies.*

3 *The electrical signal goes to the analog-to-digital converter, which changes it to a digital signal to be manipulated by the hearing aid's computer (DSP chip).*

4 *The chip is programmed to perform many operations (noise reduction, filtering, feedback cancellation, etc.) depending on the algorithm used.*

5 *The digital signal is converted back into audible sound for the patient to hear. These functions are performed instantly and continually.*

User Benefits For Digital Hearing Aids

- Availability of Automatic Signal Processing circuits which are not available with non-programmable instruments.
- Multiple circuit options within a single instrument which achieve different sound qualities.
- Automatically achieves more volume for the soft, high frequency sounds and less volume for the more intense, low frequency sounds.
- Capable of retaining the patient's complete audiometric file and preferred listening program for various environments.
- Ability to readjust your prescription should your hearing loss change.

Entry Level Comparisons

KEY	
■	Standard
❍	Available
A	RIC
B	BTE
C	CIC
D	ITE
E	ITC
F	All Styles

			Signal Processing									Automatic Signal Processing					Communication										
			Memories/ Situations			Compression Characteristics		Directional Microphones				Noise Management			Feedback Management				Wireless Compatibility		Telecoil		Cros/ BiCros		
Model	Style	Open Fit	Number	Toggle/Button	Remote	Channels	Limiting Compression	Automatic or Manual	Adaptive	Fixed		Active Noise Reduction	Active Speech Enhancement	Impulse Sound Management	Gain Reduction	Static Feedback Cancellation	Adaptive Feedback Cancellation	Direct Audio Input	FM Integration	Bluetooth Compatibility	2.4 GHz Compatibility	Automatic	Manual	Wired	Non-Wired	Ear-to-Ear Functionality
AUDIFON																										
avero	C,D,E		2	❍		2	■										■						❍			
avero S	B	❍	2	■		2	■										■						■			
avero S+	B	❍	2	■		2	■										■	❍					■			
avero M	B		2	■		2	■										■	❍					■			
avero X	B		2	■		2	■										■						■			
avero XP	B		4	■		2	■										■						■			
AUDINA																										
SIMPLEX FC	C,D,E		2	❍		2	■								■		■					❍	❍			
SIMPLEX	B,C,D,E		2	❍		2	■															❍	❍			
SIMPLEX 2P	B		4	■		2	■																■			
SIMPLEX 2	B		2	■		2	■								■								■			
OPTI-TRIM®	B		2	■		2	■																■			
BTE 478	B		2	■		1	■																■			
BTE 478P	B		3	■		2	■							■		■							■			
InstaFIT® SIMPLEX FC	E		1			2	■									■	■									
BELTONE																										
Turn	B	❍	2 - 4	■		4	■					■	■	■	■			❍					■			
Origin 2	B,C,D,E	❍	1 or 3	■		3	■	Both	■	■		■	■	■			■	❍				❍	❍	❍		
Origin 3	B,C,D,E	❍	1 or 3	■		6	■	Both	■	■		■	■	■			■	❍				❍	❍	❍		
Change	A	❍	1			6	■	Manual		■		■	■	■			■									
BERNAFON																										
INIZIA 1 NANO RITE	A	❍	3	■		ChannelFree™	■	Manual		■		■	■				■						■			
INIZIA 1 NANO	B	❍	3	■		ChannelFree™	■	Manual		■		■	■				■									
INIZIA 1 BTE CP/CPx	B	❍	4	■		ChannelFree™	■	Manual		■		■	■				■	❍	❍				■			
INIZIA 1 ITCD	E		3	❍		ChannelFree™	■	Manual		■		■	■				■						❍			
INIZIA 1 ITC	E		1	■		ChannelFree™	■					■	■				■						■			
INIZIA 1 CIC	C		1			ChannelFree™	■					■	■				■									
XTREME 120	B		1	■		5	■					■	■				■	❍	❍				■			
HANSATON																										
Linnea	F	❍	4	❍	❍	8	■	Automatic	❍			■	■	■			■					❍	❍			❍
MIRACLE EAR																										
ME 2150	F	❍	3	❍		6	■	Automatic				■	■				■	❍					❍			
Audiotone Pro	F	❍	3	❍		2	■	Manual		■						■		❍				❍	❍	■		
PERSONA																										
Claret	F	❍	4	❍		2	■	Manual		❍			■	■			■	❍		❍		❍	❍			
PHONAK																										
Audéo Q30-10	A	❍	2			8	■	Automatic	■			■	■				■									
Audéo Q30-312	A	❍	2	■	❍	8	■	Automatic	■			■	■				■	❍	❍	■						
Audéo Q30-312T	A	❍	2	■	❍	8	■	Automatic	■			■	■				■	❍	❍	■		■	■			
Bolero Q30-M312	B	❍	2	■	❍	8	■	Automatic	■			■	■				■	❍	❍	■		■	■	❍		
Bolero Q30-M13	B	❍	2	■	❍	8	■	Automatic	■			■	■				■	❍	❍	■		■	■	❍		
Bolero Q30-P/SP	B	❍	2	■	❍	8	■	Automatic	■			■	■				■	❍	❍	■		■	■	❍		

Entry Level Comparisons

KEY	
■	Standard
❍	Available
A	RIC
B	BTE
C	CIC
D	ITE
E	ITC
F	All Styles

			Signal Processing								Automatic Signal Processing						Communication										
			Memories/ Situations			Compression Characteristics		Directional Microphones			Noise Management			Feedback Management					Wireless Compatibility		Telecoil		Cros/ BiCros		
Model	Style	Open Fit	Number	Toggle/Button	Remote	Channels	Limiting Compression	Automatic or Manual	Adaptive	Fixed	Active Noise Reduction	Active Speech Enhancement	Impulse Sound Management	Gain Reduction	Static Feedback Cancellation	Adaptive Feedback Cancellation	Direct Audio Input	FM Integration	Bluetooth Compatibility	2.4 GHz Compatibility	Automatic	Manual	Wired	Non-Wired	Ear-to-Ear Functionality
PHONAK (continued)																									
Naída Q30-RIC	A	❍	2	■	❍	8	■	Automatic	■		■	■				■	❍	❍	■		■	■	❍		
Naída Q30-SP/UP	B		2	■	❍	8	■	Automatic	■		■	■				■	❍	❍	■		■	■	❍		
Virto Q30-312/13	C,D,E	❍	2	■	❍	8	■	Automatic	■		■	■				■	❍	❍	■		■	■			
REXTON																									
Arena 2	B,C,D,E	■	1			2	❍															❍	❍		
Arena 1	B,C,D,E	■	1			1	❍															❍	❍		
SIEMENS																									
Sirion S	B	❍	4	■		12	■	Automatic		■	■	■				■									
Sirion M	B	❍	4	■		12	■	Automatic		■	■	■				■	❍					■			
Sirion P	B	❍	4	■		12	■	Automatic		■	■	■				■	❍					■			
Sirion Custom	C,D,E		4	■		12	■	Automatic		■	■	■				■						❍			
SONIC																									
Pep 20	B,C,D,E	❍	3	❍			■	Manual		❍	■	■				■	❍					❍			
UNITRON																									
Moxi² E	A	❍	4	■	❍	6	■	Manual	■		■	■	■		■	■					■	■			■
Moxi² Kiss E	A	❍	4		❍	6	■	Manual	■		■	■	■		■	■									■
Moxi² Dura E	A	❍	4	■	❍	6	■	Manual	■		■	■	■		■	■					■	■			■
Quantum² E	B,C,D,E	❍	4	■	❍	6	■	Manual	■		■	■	■		■	■	❍	❍			❍	❍	❍		■
Max E	B		4	■	❍	6	■	Manual	■		■	■	■		■	■	❍	❍			■	■	❍		■
WIDEX																									
Dream 110 Fusion	A	■	3	■	❍	3	■	Automatic	■		■					■		❍	■			■		❍	■
Dream 110 Passion	A	■	3		❍	3	■	Automatic	■		■					■		❍	■					❍	■
Dream 110 Fashion	B	■	3	■	❍	3	■	Automatic	■		■					■		❍	■			■		❍	■
Dream 110 9	B	■	3	■	❍	3	■	Automatic	■		■					■	■	❍	■			■		❍	■
Dream 110 M	B	■	3		❍	3	■	Automatic	■		■					■		❍	■					❍	■
Dream 110 CIC	C		3		■	3	■				■					■		❍	■					❍	■
Dream 110 Custom	D, E		3		■	3	■	Automatic	■		■					■		❍	■			■		❍	■

BATTERY **BASICS**

Batteries pictured are actual size. The battery size that is specified for your hearing aids is dictated by shell style and circuitry options. Ask your hearing professional for more information about what you can expect from hearing aid batteries.

Battery Size **10**	*Battery Size* **312**	*Battery Size* **13**	*Battery Size* **675**
Lasts Up To **5 days**	*Lasts Up To* **10 days**	*Lasts Up To* **2 wks**	*Lasts Up To* **3 wks**
Found In **CIC, RIC, miniBTE**	*Found In* **ITC, ITE, RIC, miniBTE**	*Found In* **ITE or BTE**	*Found In* **BTE**

Why do you hear better with two ears?

Binaural listening: "bi" for two; and "aural" for ears. The human hearing mechanism is the most advanced stereophonic wonder known to man. With all of its amazing accuracy and versatility, it provides the listener with space perception, depth perception and balance.

Hearing does not happen in your ears, it happens in your brain. Your brain requires reliable information from your ears in order to decipher sound. Using just one hearing aid when hearing test results indicate that two are needed reduces your brain's chances of hearing and understanding by 50 percent, as well as removes your ability to perceive depth and space. Here are seven reasons to wear two hearing aids if indicated by your hearing test:

- Less power is needed when two hearing aids are worn. When your ears work together, lower volume settings are required for comfortable hearing. You will experience greater efficiency and clarity with two hearing aids as compared to monaural listening. The reduced need for power saves your hearing from being exposed to excessive amplification. The benefits are that loud sounds are more comfortable and listening is less stressful.

- Stereo listening gives depth perception. Anyone who has enjoyed music in stereo, compared to mono, knows the difference. Mono makes all sounds seem shallow, flat and unnatural. Your brain has the ability to hear in stereo but to do so requires that sounds be delivered by both ears. Not only are sounds more natural, they can also be understood more clearly.

- Detecting sound direction saves embarrassment and saves lives. A one-eared listener is always wondering, "Where is that sound coming from?" when someone speaks. He can also never tell from which direction the screeching automobile is coming, unless he sees it. Hearing with two ears gives you the ability to know sound direction. Binaural listening gives the listener a sense of location and the ability to locate sounds not only horizontally but also vertically, 360 degrees in all directions.

- Good manners takes two ears. One-eared listeners may be considered rude because they tend to ignore the speaker on their unaided side. In business and social situations, binaural hearing aids can be your best ally for being the best listener possible.

- Give your brain what it needs for auditory intelligence. The two halves of your brain work in harmony to give you an auditory image. Just as your brain converts the two images your two eyes see into a single picture, the same spatial perception happens with your two ears. It is the different signal each ear sends to your brain that makes this perception possible. The ears' sound signals travel up the brain stem via complicated pathways. Some cross over and eventually stimulate the opposite side of the brain. Others stimulate the same side. These complex patterns of stimulation make up auditory intelligence. If the two halves aren't sharing their signals, auditory intelligence is reduced. Binaural hearing aids help the ears get the messages to both sides of the brain, thus increasing your auditory intelligence.

- Two ears hear better in noise. Whenever several people are talking at the same time, such as in a restaurant, it becomes more difficult to understand the one person at the table with you. The one-eared listener hears all of the voices blending together. Voice discrimination in noise is difficult with two ears and becomes impossible with only one. Binaural hearing aids give the best advantage to hearing in noise.

- Quality of sound is better quality of life. The majority of hearing aid users who have worn both binaural and monaural hearing aids report a significant difference in sound quality. The vast majority of people who now use binaural hearing aids will tell you that listening with two aided ears is the only way to fully enjoy the 3-D world we live in. The advantages of superior sound over the burden of persistently poor sound should not be underestimated. Seize the opportunity to enhance your listening quality should your test results indicate two hearing aids are needed.

Basic Level Comparisons

KEY	
■	Standard
❍	Available
A	RIC
B	BTE
C	CIC
D	ITE
E	ITC
F	All Styles

Model	Style	Open Fit	Signal Processing: Memories/Situations: Number	Toggle/Button	Remote	Compression Characteristics: Channels	Limiting Compression	Directional Microphones: Automatic or Manual	Adaptive	Fixed	Automatic Signal Processing: Noise Management: Active Noise Reduction	Active Speech Enhancement	Impulse Sound Management	Feedback Management: Gain Reduction	Static Feedback Cancellation	Adaptive Feedback Cancellation	Communication: Direct Audio Input	FM Integration	Wireless Compatibility: Bluetooth Compatibility	2.4 GHz Compatibility	Telecoil: Automatic	Manual	Cros/BiCros: Wired	Non-Wired	Ear-to-Ear Functionality
AGX HEARING																									
AGXO K70	F	❍	1-4	❍		3	■	Both		■	■	■	■	❍	❍	■	❍	❍			❍	❍	❍		
AGXO K90	F		1-4	❍	❍	3	■	Both		■	■	■	■	❍	❍	■	❍	❍	❍		❍	❍	❍		
AGXs3s i20	F	❍	4	❍	❍	4	■	Either		■	■	■			■	■	❍	■	■		■	■			■
AGXsig i20	A,C,D,E	❍	4	❍	■	4	■	Either		■	■	■			■	■	❍	■	■		■	■			■
AUDIBEL																									
Start Wireless 7	F	❍	4	❍	❍	4	■	Either		■	■	■			■	■	❍	■	■		■	■			■
Start Wireless 5	A,C,D,E	❍	4	❍	■	4	■	Either		■	■	■			■	■	❍	■	■		■	■			■
AMP	DISC*		N/A			4	■			■						■									
AUDIFON																									
arriva	C,D,E		4	❍		4	■							■		■						❍			
arriva S	B	❍	2	■		4	■							■		■	❍					■			
arriva S+	B	❍	2	■		4	■							■		■	❍					■			
arriva M	B		2	■		4	■							■		■						■			
arria X	B		2	■		4	■							■		■						■			
miro	D,E		3	■		4	■	Manual		■	■			■		■					❍	■			
miro XS	B	❍	3	■		4	■	Manual		■	■			■		■					■	■			
miro S+	B	❍	3	■		4	■	Manual		■	■			■		■	❍				■	■			
switch 8	A		4	■		8	■				■			■		■									
switch 8 TRT	A		4	■		8	■				■			■		■									
AUDINA																									
INTUITION® 2ER	C,D,E		4	❍		2	■				■			■		■					❍	❍			
INTUITION® 2FC	B,C,D,E		4	❍		2	■							■		■	■		■		❍	❍			
INTUITION® 2	B,C,D,E		4	❍		2	■							■		■			■		❍	❍			
SPARO® 2ER	B	■	4	■		2	■				■			■		■	■	❍				❍			
SPARO® 2	B	■	4	■		2	■							■		■		❍				❍			
IRIC 2	A	■	4	■		2	■				■			■		■	■					■			
InstaFIT® INTUITION 2ER	E		4	■		2	■				■					■	■								
BELTONE																									
Promise 6	F	❍	1 or 4	❍	❍	6	■	Both	■	■	■	■	■			■	❍		❍	■	❍	❍	❍		❍
True 6	F	❍	1 or 4	❍	❍	6	■	Both	■	■	■	■	■			■	❍		❍	■	❍	❍	❍		
Prime	E	❍	1			6	■				■	■	■			■									
True 3	F	❍	1 or 3	❍	❍	6	■	Both	■	■	■	■	■			■	❍				❍	❍	❍		
Force	B		3	■		9	■				■	■	■			■	❍					■	❍		
BERNAFON																									
INIZIA 3 NANO RITE	A	❍	3	■		ChannelFree™	■	Automatic	■	❍	■	■				■						■			
INIZIA 3 NANO	B	❍	3	■		ChannelFree™	■	Automatic	■	❍	■	■				■									
INIZIA 3 BTE CP/CPx	B	❍	4	■		ChannelFree™	■	Automatic	■	❍	■	■				■	❍	❍				■			
INIZIA 3 ITED/ITCD	D,E		3	❍		ChannelFree™	■	Automatic	■	❍	■	■				■						❍			
INIZIA 3 ITCP/ITC	E		3	❍		ChannelFree™	■				■	■				■						❍			
INIZIA 3 CICP/CIC	C		1			ChannelFree™	■				■	■				■									
EAR-TRONICS																									
SPIN NR ITE	D	❍	4	❍		2	■	Manual			❍				■										

* Invisible hearing aid styles - See article on page 22 for more information.

Basic Level Comparisons

KEY
■ Standard
❍ Available
A RIC
B BTE
C CIC
D ITE
E ITC
F All Styles

Model	Style	Open Fit	Signal Processing: Memories/Situations: Number	Toggle/Button	Remote	Compression Characteristics: Channels	Limiting Compression	Directional Microphones: Automatic or Manual	Adaptive	Fixed	Automatic Signal Processing: Noise Management: Active Noise Reduction	Active Speech Enhancement	Impulse Sound Management	Feedback Management: Gain Reduction	Static Feedback Cancellation	Adaptive Feedback Cancellation	Communication: Direct Audio Input	FM Integration	Wireless Compatibility: Bluetooth Compatibility	2.4 GHz Compatibility	Telecoil: Automatic	Manual	Cros/BiCros: Wired	Non-Wired	Ear-to-Ear Functionality
EAR-TRONICS (continued)																									
SPIN NR BTE 312	B	❍	4	❍		2	■	Manual			❍				■										
SPIN NR BTE 13	B	❍	4	❍		2	■	Manual			❍				■										
GENERAL HEARING																									
Simplicity Smart Touch	A	■	4	■		4	■						■		■										
Simplicity Premier	A	■	4	■		4	■						■		■										
Simply Soft Smart touch	D,E		4	■		4	■						■		■										
Simply Slim Smart Touch	D,E		4	■		4	■						■		■										
Simplicicty Smart Touch Plus	A	■	4	■		4	■						■		■										
Discovery MLD	A	■	4	■		4	■						■												
Digi K	F	❍	4	❍		4	■	Manual		■			■												
Simply Soft Premier	D,E		4	■		4	■						■												
HANSATON																									
Sorino	F	❍	5	❍	❍	12	■	Automatic	❍		■	■	■		■		❍	❍			❍	❍			❍
AQ Comfort Class Rechargeable	A,B,D,E	❍	6	❍	❍	12	■	Automatic	❍		■	■	■		■		❍	❍			❍	■			❍
INTERTON																									
Elipse	B		3	■		9	■				■	■	■		■	■	■								
Share 1.3	D,E	❍	4	■		6	■	Both	■	■	■	■	■		■	■	■				■	❍			
Share 1.2	A,B,D,E	❍	3	■		6	■	Both	■	■	■	■	■		■	■	■				■	❍			
MICROTECH																									
Propel w10	F	❍	4	❍	❍	4	■	Either		■	■	■		■	■	❍	■	■			■	■			■
Avail w10	A,C,D,E	❍	4	❍	■	4	■	Either		■	■	■		■	■	❍	■	■			■	■			■
AMP	DISC*		N/A			4	■			■					■										
MIRACLE EAR																									
ME 3200	F	❍	6	❍	❍	24	■	Automatic	■		■	■	■		■	❍		■			❍	❍			■
NUEAR																									
Intro Wireless 4	F	❍	4	❍	❍	4	■	Either		■	■	■		■	■	❍	■	■			■	■			■
Intro Wireless 2	A,C,D,E	❍	4	❍	■	4	■	Either		■	■	■		■	■	❍	■	■			■	■			■
AMP	DISC*		N/A			4	■			■					■										
OTICON																									
Ino Pro	F		1-4	❍	❍	3	■	Both		■	■	■	■	❍	❍	■	❍	❍	❍		❍	❍	❍		
Ino	F	❍	1-4	❍		3	■	Both		■	■	■	■	❍	❍	■	❍	❍			❍	❍	❍		
Chli SP 5	B		1-4	❍	❍	6	■	Both	■	❍	■	■	■	❍	❍	■	❍	❍	❍		❍	❍	❍		■
intiga 6	A	■	1-4		❍	6	■	Both	■	❍	■	■	■	❍	❍	■		❍	❍						■
PERSONA																									
Evok 500	F	❍	5	■		4	■		❍		■	■	■			■			❍		❍	❍			
Monet 300	F	❍	5	❍		2	■	Manual		❍		■	■			■			❍		❍	❍			
PHONAK																									
Audéo Q50-10	A	❍	3			12	■	Automatic	■		■	■				■									
Audéo Q50-312	A	❍	3	■	❍	12	■	Automatic	■		■	■				■	❍	❍	■					❍	■
Audéo Q50-312T	A	❍	3	■	❍	12	■	Automatic	■		■	■				■	❍	❍	■		■	■		❍	■
Bolero Q50-M312	B	❍	3	■	❍	12	■	Automatic	■		■	■				■	❍	❍	■		■	■	❍	❍	■

Basic Level Comparisons

KEY	
■	Standard
❍	Available
A	RIC
B	BTE
C	CIC
D	ITE
E	ITC
F	All Styles

Model	Style	Open Fit	Signal Processing: Memories/Situations: Number	Toggle/Button	Remote	Compression Characteristics: Channels	Limiting Compression	Directional Microphones: Automatic or Manual	Adaptive	Fixed	Automatic Signal Processing: Noise Management: Active Noise Reduction	Active Speech Enhancement	Impulse Sound Management	Feedback Management: Gain Reduction	Static Feedback Cancellation	Adaptive Feedback Cancellation	Communication: Direct Audio Input	FM Integration	Wireless Compatibility: Bluetooth Compatibility	2.4 GHz Compatibility	Telecoil: Automatic	Manual	Cros/BiCros: Wired	Non-Wired	Ear-to-Ear Functionality
PHONAK (continued)																									
Bolero Q50-M13	B	❍	3	■	❍	12	■	Automatic	■		■	■				■	❍	❍	■		■	■	❍	❍	■
Bolero Q50-P/SP	B	❍	3	■	❍	12	■	Automatic	■		■	■				■	❍	❍	■		■	■	❍	❍	■
Naída Q50-RIC	A	❍	3	■	❍	12	■	Automatic	■		■	■				■	❍	❍	■		■	■	❍	❍	■
Naída Q50-SP/UP	B		3	■	❍	12	■	Automatic	■		■	■				■	❍	❍	■		■	■	❍	❍	■
Virto Q50-nano	IIC*	❍	3		❍	12	■				■	■				■	❍	❍							
Virto Q50-312/13	C, D, E	❍	3	■	❍	12	■	Automatic	■		■	■				■	❍	❍	■		■	■		❍	■
RESOUND																									
Sparx	B		3	■		9	■	Both	■	■	■	■	■		■	■	■								
Vea 3	B,C,D,E	❍	4	■		7	■	Both	■	■	■	■	■		■	■	■					■	❍			
Vea 2	B,C,D,E	❍	4	■		6	■	Both	■	■	■	■	■		■	■	■					■	❍			
REXTON																									
Onyx ECO+	A	■	4	■	❍	6	■	Automatic	■		■	■				■						■			■
JOY 6	B,C,D,E	■	4	■		12	■	Manual		■	■	■				■						■	❍		
SIEMENS																									
Orion ric	A	❍	4	■	❍	16	■	Automatic		■	■	■				■						■			■
Orion S	B	❍	4	■	❍	16	■	Automatic		■	■	■				■									■
Orion M	B	❍	4	■	❍	16	■	Automatic		■	■	■				■	❍					■			■
Orion P	B	❍	4	■	❍	16	■	Automatic		■	■	■				■	❍					■			■
Orion custom	C,D,E		4	■	❍	16	■	Automatic		■	■	■				■					❍	❍			■
Pure 3mi	A	❍	6	■	❍	24	■	Automatic	■		■	■	■			■	❍		❍		■	■			■
Motion 3mi	B	❍	6	■	❍	24	■	Automatic	■		■	■	■			■	❍		❍		❍	❍			■
Insio 3mi	C,D,E		6	■	❍	24	■	Automatic	■		■	■	■			■	❍		❍		❍	❍			❍
Aquaris 3mi	B	❍	6		❍	24	■	Automatic	■		■	■	■			■	❍		❍			❍			■
Nitro 3mi	B,C,D,E		6	■	❍	32	■	Automatic	■		■	■	■			■	❍		❍		■	■			■
SONIC																									
Endura 6	B		3	■		6	■	Manual	■	■	■	■			■	■	■	■				■			
Charm 40	B,C,D,E	❍	3	❍			■	Manual		■	■	■				■	❍					❍			
STARKEY																									
3 Series i20	F	❍	4	❍	❍	4	■	Either		■	■	■			■	■	❍	■	■		■	■			■
Ignite Wireless i20	A,C,D,E	❍	4	❍	■	4	■	Either		■	■	■			■	■	❍	■	■		■	■			■
Xino 20	A	❍	4	❍	■	4	■	Either		■	■	■			■	■	❍	■			■	■			
AMP	DISC*		N/A			4	■			■					■										
UNITRON																									
Moxi² 10	A	❍	4	■	❍	10	■	Both	■		■	■	■		■	■			■		■	■			■
Moxi² Kiss 10	A	❍	4		❍	10	■	Both	■		■	■	■		■	■			■						■
Moxi² Dura 10	A	❍	4	■	❍	10	■	Both	■		■	■	■		■	■			■		■	■			■
Quantum² 10	B,D,E	❍	4	■	❍	10	■	Both	■		■	■	■		■	■	❍	❍	■		❍	❍	❍		■
Max 6	B		4	■	❍	6	■	Both	■		■	■	■		■	■	❍	❍	■		■	■	❍		■
Tandem 4	B	❍	4	■	❍	4	■	Manual		■	■	■	■		■	■						■		■	
WIDEX																									
Dream 220 Fusion	A	■	4	■	❍	5	■	Automatic	■		■					■		❍	■			■		❍	■
Dream 220 Passion	A	■	4		❍	5	■	Automatic	■		■					■		❍	■					❍	■

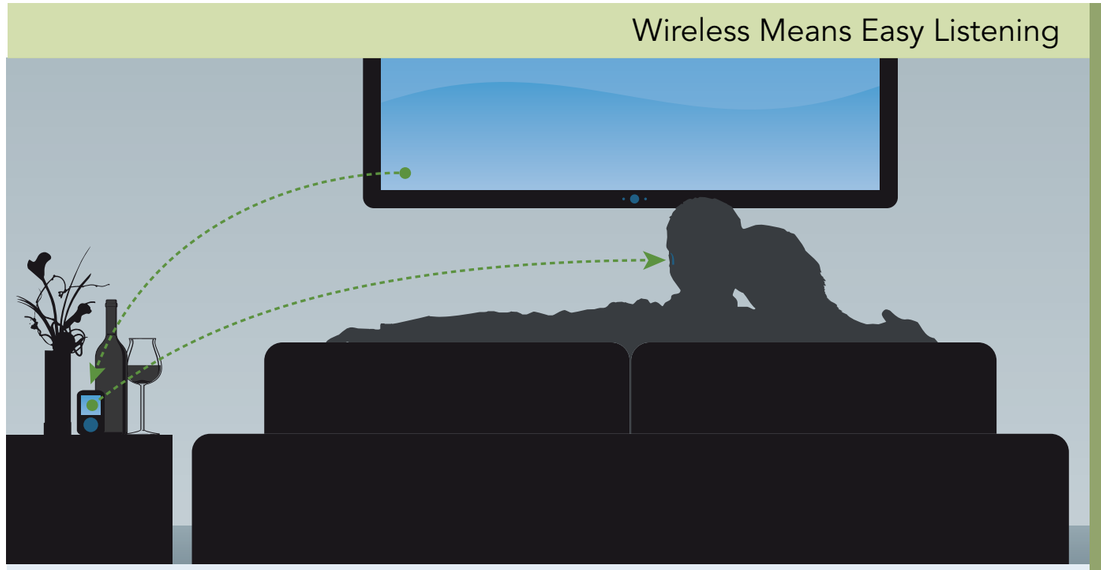
* Invisible hearing aid styles - See article on page 22 for more information.

Basic Level Comparisons

KEY	
■	Standard
❍	Available
A	RIC
B	BTE
C	CIC
D	ITE
E	ITC
F	All Styles

Model	Style	Open Fit	Signal Processing: Memories/Situations: Number	Toggle/Button	Remote	Compression Characteristics: Channels	Limiting Compression	Directional Microphones: Automatic or Manual	Adaptive	Fixed	Automatic Signal Processing: Noise Management: Active Noise Reduction	Active Speech Enhancement	Impulse Sound Management	Feedback Management: Gain Reduction	Static Feedback Cancellation	Adaptive Feedback Cancellation	Communication: Direct Audio Input	FM Integration	Wireless Compatibility: Bluetooth Compatibility	2.4 GHz Compatibility	Telecoil: Automatic	Manual	Cros/BiCros: Wired	Non-Wired	Ear-to-Ear Functionality
WIDEX (continued)																									
Dream 220 Fashion	B	■	4	■	❍	5	■	Automatic	■		■					■		❍	■			■		❍	■
Dream 220 9	B	■	4	■	❍	5	■	Automatic	■		■					■	■	❍	■			■		❍	■
Dream 220 M	A	■	4		❍	5	■	Automatic	■		■					■		❍	■					❍	■
Dream 220 CIC	C		4		■	5	■				■					■		❍	■					❍	■
Dream 220 Custom	D, E		4		■	5	■	Automatic	■		■					■		❍	■			■		❍	■
Super 220	A		4	■	❍	5	■	Automatic	■		■					■	❍	❍	■			■			■

Wireless Means Easy Listening



Wireless hearing aids use a streaming device to send sound directly into your hearing aids and help you listen to the TV, phone, or music with clarity and ease.

Today, hearing aid manufacturers from around the world are converting hearing aids into high-tech lifestyle accessories. These sleek and sophisticated devices enhance personal conversation while wirelessly streaming audio directly into your hearing aids. This allows you to not only hear correctly, but also to fully engage in your favorite pastimes.

"Streaming" is an invisible and wireless technology that uses a small accessory to connect your hearing aids to a wide range of devices. TVs, mobile phones, music players, and laptops can all be linked to your hearing aids. This process allows people with difficulty hearing to enjoy clearer audio at any time, even when you're with others.

Oticon Streamer 2

Starkey SurfLink Mobile

ReSound Unite

Unitron uDirect 2

Advanced Level Comparisons

KEY	
■	Standard
❍	Available
A	RIC
B	BTE
C	CIC
D	ITE
E	ITC
F	All Styles

Model	Style	Open Fit	Signal Processing: Memories/Situations: Number	Toggle/Button	Remote	Compression Characteristics: Channels	Limiting Compression	Directional Microphones: Automatic or Manual	Adaptive	Fixed	Automatic Signal Processing: Noise Management: Active Noise Reduction	Active Speech Enhancement	Impulse Sound Management	Feedback Management: Gain Reduction	Static Feedback Cancellation	Adaptive Feedback Cancellation	Communication: Direct Audio Input	FM Integration	Wireless Compatibility: Bluetooth Compatibility	2.4 GHz Compatibility	Telecoil: Automatic	Manual	Cros/BiCros: Wired	Non-Wired	Ear-to-Ear Functionality
AGX HEARING																									
AGXO H150	F	❍	1-4	❍	❍	6	■	Both	■	❍	■	■	■	❍	❍	■	❍	❍	❍		❍	❍	❍		■
AGXO H160	F	❍	1-4	❍	❍	8	■	Both	■	❍	■	■	■	❍	❍	■	❍	❍	❍		❍	❍	❍		■
AGXs3s i30	F	❍	4	❍	❍	6	■	Either		■	■	■			■	■	❍	■	■		■	■			■
AGXs3s i70	F	❍	4	❍	❍	8	■	Either		■	■	■			■	■	❍	■	■		■	■			■
AGXs3s Tinnitus	A	❍	4	❍		12	■	Either		■	■	■			■	■	❍	■			■	■			
AGXsig i30	A,C,D,E	❍	4	❍	■	6	■	Either		■	■	■			■	■	❍	■	■		■	■			■
AGXswi i70	A,C,D,E	❍	4	❍	■	8	■	Either		■	■	■			■	■	❍	■	■		■	■			■
AUDIBEL																									
Audibel A2 Wireless Silver	F	❍	4	❍	❍	8	■	Either		■	■	■			■	■	❍	■	■		■	■			■
Range Silver	A,C,D,E	❍	4	❍	■	8	■	Either		■	■	■			■	■	❍	■	■		■	■			■
Start Wireless 8	F	❍	4	❍	❍	6	■	Either		■	■	■			■	■	❍	■	■		■	■			■
Start Wireless 6	A,C,D,E	❍	4	❍	■	6	■	Either		■	■	■			■	■	❍	■	■		■	■			■
AUDIFON																									
libra	C,D,E		4	❍		8	■	Manual	■		■			■		■					❍				
libra P	C,D,E		4	❍		8	■				■			■		■					❍				
libra xs	B	❍	4	■		8	■	Manual	■		■			■		■					■				
libra S	B	❍	4	■		8	■	Manual	■		■			■		■	■				■				
via	D,E		4	❍		8	■				■			■		■		■			❍			■	■
via S	B	❍	4	■		8	■				■			■		■		■			■			■	■
via M	B	❍	4	■		8	■				■			■		■		■			■				
AUDINA																									
fix4®	B	■	4	■		4	■				■		■		■	■						■			
INTUITION® 4AD	B,C,D,E		4	❍		4	■	Both	■		■	■	■			■	■		■		❍	❍			
INTUITION® 4+	B,C,D,E		4	❍		4	■				■	■	■			■	■		■		❍	❍			
SPARO® AD	B	■	4	■		4	■	Both	■		■	■	■			■		❍				❍			
SPARO®	B	■	4	■		4	■				■	■	■			■		❍				❍			
IRIC 4	A	■	4	■		4	■	Both	■		■	■	■			■						■			
InstaFIT® INTUITION 4+	E		4	■		4	■				■	■													
BELTONE																									
Promise 9	F	❍	1 or 4	❍	❍	9	■	Both	■	■	■	■	■			■	❍		❍	■	❍	❍	❍		❍
True 9	F	❍	1 or 4	❍	❍	9	■	Both	■	■	■	■	■			■	❍		❍	■	❍	❍	❍		
Prime Plus	E	❍	1			9	■				■	■	■			■									
BERNAFON																									
Carista 5 NANO RITE	A	❍	7	■	❍	ChannelFree™	■	Automatic	■	❍	■	■	■			■			■		■	■			■
Carista 5 NANO	B	❍	6	■	❍	ChannelFree™	■	Automatic	■	❍	■	■	■			■			■						■
Carista 5 BTE CP/CPx	B	❍	8	■	❍	ChannelFree™	■	Automatic	■	❍	■	■	■			■	❍	❍	■		■	■			■
Carista 5 ITED/ITCPD/ITCD	D,E		7	❍	❍	ChannelFree™	■	Automatic	■	❍	■	■	■			■			■		❍	❍			■
Carista 5 ITC/CICP/CIC	C,E		4	❍		ChannelFree™	■				■	■	■			■					❍	❍			
Carista 3 NANO RITE	A	❍	7	■	❍	ChannelFree™	■	Automatic	■	❍	■	■				■			■			■			■
Carista 3 NANO	B	❍	6	■	❍	ChannelFree™	■	Automatic	■	❍	■	■				■			■						■
Carista 3 BTE CP/CPx	B	❍	8	■	❍	ChannelFree™	■	Automatic	■	❍	■	■				■	❍	❍	■			■			■

Advanced Level Comparisons

KEY	
■	Standard
❍	Available
A	RIC
B	BTE
C	CIC
D	ITE
E	ITC
F	All Styles

Model	Style	Open Fit	Signal Processing: Memories/Situations: Number	Toggle/Button	Remote	Compression Characteristics: Channels	Limiting Compression	Directional Microphones: Automatic or Manual	Adaptive	Fixed	Automatic Signal Processing: Noise Management: Active Noise Reduction	Active Speech Enhancement	Impulse Sound Management	Feedback Management: Gain Reduction	Static Feedback Cancellation	Adaptive Feedback Cancellation	Communication: Direct Audio Input	FM Integration	Wireless Compatibility: Bluetooth Compatibility	2.4 GHz Compatibility	Telecoil: Automatic	Manual	Cros/BiCros: Wired	Non-Wired	Ear-to-Ear Functionality
BERNAFON (continued)																									
Carista 3 ITED/ITCPD/ITCD	D,E		7	❍	❍	ChannelFree™	■	Automatic	■	❍	■	■				■			■			❍			■
Carista 3 ITC/CICP/CIC	C,E		4	❍		ChannelFree™	■				■	■				■						❍			
EAR-TRONICS																									
NR+ ITE	D,E,C	❍	4	■		4	■	Manual		❍	■				■				❍	❍		❍			
NR+ BTE 312	A,B	❍	4	■		4	■	Manual		❍	■				■				❍	❍		❍			
NR+ BTE 13 Mini	A,B	❍	4	■		4	■	Manual		❍	■				■				❍	❍		❍			
NR+ BTE 13	B	❍	4	■		4	■	Manual		❍	■				■				❍	❍		❍			
Intune ITE	D,E,C	❍	4	■		4	■	Manual	❍	❍	■				■				❍	❍	❍	❍			
Intune BTE 312	A,B	❍	4	■		4	■	Manual	❍	❍	■				■				❍	❍	❍	❍			
Intune BTE 13 Mini	A,B	❍	4	■		4	■	Manual	❍	❍	■				■				❍	❍	❍	❍			
Intune BTE 13	B	❍	4	■		4	■	Manual	❍	❍	■				■				❍	❍	❍	❍			
GENERAL HEARING																									
Triad	F	■	4	■		4	■						■			■									
HANSATON																									
Inara	F	❍	6	❍	❍	16	■	Automatic	❍		■	■	■			■		❍	❍		❍	❍			❍
AQ Business Class Rechargeable	A,B,D,E	❍	6	❍	❍	16	■	Automatic	❍		■	■	■			■		❍	❍		❍	■			❍
INTERTON																									
Cosmo 6	A,C,D,E	❍	4	■	❍	15	■	Both	■	■	■	■	■		■	■			■	■	■	❍			
Scope 6	F	❍	4	■		15	■	Both	■	■	■	■	■		■	■	■				■	❍			
Cosmo 4	A,C,D,E	❍	4	■	❍	9	■	Both	■	■	■	■	■		■	■			■	■	■	❍			
Scope 4	F	❍	3	■		9	■	Both	■	■	■	■	■		■	■	■				■	❍			
Crisp 3	F	❍	4	■	❍	8	■	Both	■	■	■	■	■		■	■	■		■	■	■	❍			
MICROTECH																									
Propel w30	F	❍	4	❍	❍	8	■	Either		■	■	■			■	■	❍	■	■		■	■			■
Mobility 30	A,C,D,E	❍	4	❍	■	8	■	Either		■	■	■			■	■	❍	■	■		■	■			■
Propel w20	F	❍	4	❍	❍	6	■	Either		■	■	■			■	■	❍	■	■		■	■			■
Avail w20	A,C,D,E	❍	4	❍	■	6	■	Either		■	■	■			■	■	❍	■	■		■	■			■
MIRACLE EAR																									
ME 4200	F	❍	6	❍	❍	32	■	Automatic	■		■	■	■			■	❍		■		❍	❍			■
NUEAR																									
NuEar SDS Wireless Presitge	F	❍	4	❍	❍	8	■	Either		■	■	■			■	■	❍	■	■		■	■			■
LOOK Prestige	A,C,D,E	❍	4	❍	■	8	■	Either		■	■	■			■	■	❍	■	■		■	■			■
Intro Wireless 5	F	❍	4	❍	❍	6	■	Either		■	■	■			■	■	❍	■	■		■	■			■
Intro Wireless 3	A,C,D,E	❍	4	❍	■	6	■	Either		■	■	■			■	■	❍	■	■		■	■			■
OTICON																									
Nera Pro	F	❍	1-4	❍	❍	8	■	Both	■	❍	■	■	■	❍	❍	■	❍	❍	❍		❍	❍	❍		■
Nera	F	❍	1-4	❍	❍	6	■	Both	■	❍	■	■	■	❍	❍	■	❍	❍	❍		❍	❍	❍		■
Chili SP 7	B		1-4	❍	❍	8	■	Both	■	❍	■	■	■	❍	❍	■	❍	❍	❍		❍	❍	❍		■
Intiga 8	A	■	1-4		❍	8	■	Both	■	❍	■	■	■	❍	❍	■		❍	❍						■
PERSONA																									
Monet 500	F	❍	4	■		4	■	Manual		❍	■	■	■			■	❍		❍			❍			

Advanced Level Comparisons

KEY	
■	Standard
❍	Available
A	RIC
B	BTE
C	CIC
D	ITE
E	ITC
F	All Styles

Model	Style	Open Fit	Signal Processing: Memories/Situations: Number	Toggle/Button	Remote	Compression Characteristics: Channels	Limiting Compression	Directional Microphones: Automatic or Manual	Adaptive	Fixed	Automatic Signal Processing: Noise Management: Active Noise Reduction	Active Speech Enhancement	Impulse Sound Management	Feedback Management: Gain Reduction	Static Feedback Cancellation	Adaptive Feedback Cancellation	Communication: Direct Audio Input	FM Integration	Wireless Compatibility: Bluetooth Compatibility	2.4 GHz Compatibility	Telecoil: Automatic	Manual	Cros/BiCros: Wired	Non-Wired	Ear-to-Ear Functionality
PHONAK																									
Audéo Q70-10	A	❍	4			16	■	Automatic	■		■	■	■			■									
Audéo Q70-312	A	❍	4	■	❍	16	■	Automatic	■		■	■	■			■	❍	❍	■					❍	■
Audéo Q70-312T	A	❍	4	■	❍	16	■	Automatic	■		■	■	■			■	❍	❍	■		■	■		❍	■
Bolero Q70-M312	B	❍	4	■	❍	16	■	Automatic	■		■	■	■			■	❍	❍	■		■	■	❍	❍	■
Bolero Q70-M13	B	❍	4	■	❍	16	■	Automatic	■		■	■	■			■	❍	❍	■		■	■	❍	❍	■
Bolero Q70-P/SP	B	❍	4	■	❍	16	■	Automatic	■		■	■	■			■	❍	❍	■		■	■	❍	❍	■
Naída Q70-RIC	A	❍	4	■	❍	16	■	Automatic	■		■	■	■			■	❍	❍	■		■	■	❍	❍	■
Naída Q70-SP/UP	B		4	■	❍	16	■	Automatic	■		■	■	■			■	❍	❍	■		■	■	❍	❍	■
Virto Q70-nano	IIC*	❍	4		❍	16	■				■	■	■			■	❍	❍							
Virto Q70-312/13	C,D,E	❍	4	■	❍	16	■	Automatic	■		■	■	■			■	❍	❍	■		■	■		❍	■
RESOUND																									
Lex 8	D		1			17	■				■	■	■		■	■									
REXTON																									
Strata 12	A	■	5	■	❍	24	■	Automatic	■	■	■	■	■			■	❍		■		■	■			■
Charismo 12	A	■	5	■		24	■	Automatic	■	■	■	■	■			■									
Accord 12	B,C,D,E	■	5	■	❍	24	■	Automatic	■	■	■	■	■			■	❍		■		■	■	❍		■
Strata 8	A	■	5	■	❍	16	■	Automatic	■	■	■	■	■			■	❍		■		■	■			■
Onyx 8+	A	■	4	■	❍	8	■	Automatic	■		■	■	■			■	❍		■		■	■			■
JOY 8	B,C,D,E	■	5	■	❍	16	■	Automatic	■		■	■				■			■		■	■	❍		■
SIEMENS																									
Pure 5mi	A	❍	6	■	❍	32	■	Automatic	■		■	■	■			■	❍		❍		■	■			■
Motion 5mi	B	❍	6	■	❍	32	■	Automatic	■		■	■	■			■	❍		❍		■	■			■
Life 5mi	B	■	6	■	❍	32	■	Automatic	■		■	■	■			■	❍		❍			❍			■
Insio 5mi	C,D,E		6	■	❍	32	■	Automatic	■		■	■	■			■	❍		❍		❍	❍			❍
Aquaris 5mi	B	❍	6		❍	32	■	Automatic	■		■	■	■			■	❍		❍			❍			■
SONIC																									
Charm 60	B,C,D,E	❍	4	❍	❍		■	Automatic	❍	❍	■	■				■	❍		■		❍	❍			■
Flip 60	A	■	3	■	❍		■	Automatic		■	■	■				■			■		❍	■			■
Flip 80	A	■	4	■	❍		■	Automatic	■	■	■	■	■			■			■		■	■			■
Bliss 80	B,C,D,E	❍	4	❍	❍		■	Automatic	❍	❍	■	■	■			■	❍		■		❍	❍			■
Endura 12	B		4	■		12	■	Automatic	■	■	■	■			■		■	■				■			
STARKEY																									
Xino Wireless i70	A	❍	4	❍	■	8	■	Either		■	■	■			■	■	❍	■	■						■
3 Series i70	F	❍	4	❍	❍	8	■	Either		■	■	■			■	■	❍	■	■		■	■			■
Wi Series i70	A,C,D,E	❍	4	❍	■	8	■	Either		■	■	■			■	■	❍	■	■		■	■			■
3 Series i30	F	❍	4	❍	❍	6	■	Either		■	■	■			■	■	❍	■	■		■	■			■
Ignite Wireless i30	A,C,D,E	❍	4	❍	■	6	■	Either		■	■	■			■	■	❍	■	■		■	■			■
Xino 70	A	❍	4	❍	■	8	■	Either		■	■	■			■	■	❍	■			■	■			
Xino 30	A	❍	4	❍	■	6	■	Either		■	■	■			■	■	❍	■			■	■			
UNITRON																									
Moxi² 20	A	❍	4	■	❍	20	■	Both	■		■	■	■			■	■	■			■	■			■
Moxi² Kiss 20	A	❍	4		❍	20	■	Both	■		■	■	■			■	■	■			■	■			■

* Invisible hearing aid styles - See article on page 22 for more information.

Advanced Level Comparisons

KEY
■ Standard
❍ Available
A RIC
B BTE
C CIC
D ITE
E ITC
F All Styles

Model	Style	Open Fit	Signal Processing: Memories/Situations: Number	Toggle/Button	Remote	Compression Characteristics: Channels	Limiting Compression	Directional Microphones: Automatic or Manual	Adaptive	Fixed	Automatic Signal Processing: Noise Management: Active Noise Reduction	Active Speech Enhancement	Impulse Sound Management	Feedback Management: Gain Reduction	Static Feedback Cancellation	Adaptive Feedback Cancellation	Communication: Direct Audio Input	FM Integration	Wireless Compatibility: Bluetooth Compatibility	2.4 GHz Compatibility	Telecoil: Automatic	Manual	Cros/BiCros: Wired	Non-Wired	Ear-to-Ear Functionality
UNITRON (continued)																									
Quantum² 20	B,C,D,E	❍	4	■	❍	20	■	Both	■		■	■	■		■	■	❍	❍	■		❍	❍	❍		■
Moxi² 16	A	❍	4	■	❍	16	■	Both	■		■	■	■		■	■			■		■	■			■
Moxi² Kiss 16	A	❍	4		❍	16	■	Both	■		■	■	■		■	■			■						■
Moxi² Dura 16	A	❍	4	■	❍	16	■	Both	■		■	■	■		■	■			■		■	■			■
Quantum² 16	B,C,D,E	❍	4	■	❍	16	■	Both	■		■	■	■		■	■	❍	❍	■		❍	❍	❍		■
Max 20	B		4	■	❍	20	■	Both	■		■	■	■		■	■	❍	❍	■		■	■	❍		■
Tandem 16	B	❍	4	■	❍	16	■	Both	■		■	■	■		■	■						■		■	
WIDEX																									
Dream 330 Fusion	A	■	5	■	❍	10	■	Automatic	■		■	■	■		■			❍	■			■		❍	■
Dream 330 Passion	A	■	5		❍	10	■	Automatic	■		■	■	■		■			❍	■					❍	■
Dream 330 Fashion	B	■	5	■	❍	10	■	Automatic	■		■	■	■		■			❍	■			■		❍	■
Dream 330 9	B	■	5	■	❍	10	■	Automatic	■		■	■	■		■	■	■	❍	■			■		❍	■
Dream 330 M	B	■	5		❍	10	■	Automatic	■		■	■	■		■			❍	■					❍	■
Dream 330 CIC	C		5		■	10	■	Automatic	■		■	■	■		■			❍	■					❍	■
Dream 330 Custom	D, E		5		■	10	■	Automatic	■		■	■	■		■			❍	■			■		❍	■

Hearing Aids or Surgery:

Which Is Right For You?

The majority of patients with hearing problems can be fully and most appropriately helped with the use of properly-fitted hearing aids. Hearing loss in adults is not generally a medical condition - meaning that in the majority of cases, medical or surgical treatment will not provide relief.

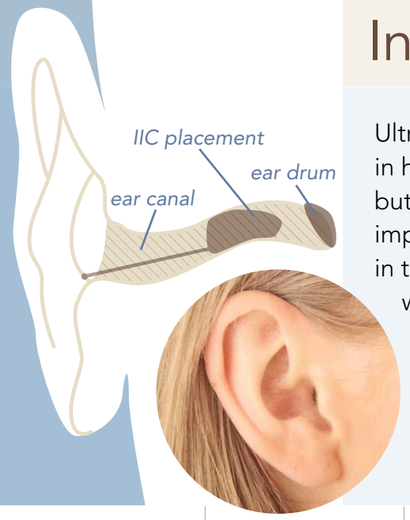
In addition to this, most surgeries have side effects not limited to the destruction of the last of your natural hearing and are not recommended unless your hearing problem has escalated beyond the point that traditional hearing aids can treat.

With costs upwards of $50,000, surgeries can also be expensive. Even the most expensive and advanced hearing aids are thousands less and don't carry the risks of invasive surgery.

No treatment can ever fully restore your hearing back to it's original potential, and both surgery and hearing aids have their place. Surgery may be considered if you have profound hearing loss and your sound levels are low. Hearing aids are better for amplifying existing hearing, allowing you to better distinguish words that you can still hear.

Approximately 80 percent of adult patients with complaints of hearing problems cannot benefit from medical or surgical treatment but can be helped with hearing aids.

Invisible Hearing Aid Comparisons



Ultra-tiny, completely invisible hearing devices are the latest advancement in hearing technology. These hearing aids are similar to traditional CICs, but they are smaller in size and fit deep into the ear canal, making them impossible to see when worn. There are currently three types of hearing aids in this category: an extended-wear analog hearing aid (like Lyric), a ready-to-wear digital hearing aid (like AMP), and a custom-fit digital hearing aid (like Cue). While the cosmetic appeal of these new products has driven their popularity, not everyone is a candidate. The size and shape of your ear canal, as well as the degree of your hearing loss, are factors considered for candidacy.

Manufacturer	Model	Material	Custom Fit	Extended Wear	Minimum Length	Minimum Diameter	Battery Size	Battery Life Expectancy	Insertable by Patient	Removable by Patient	Feedback Cancellation	Noise Reduction	Remote Control	Programmable
AGX HEARING	AGXOdi100	Acrylic Plastic	■		Varies	Varies	10A	7-10 days	■	■	■	■		■
AGX HEARING	AGXOdi80	Acrylic Plastic	■		Varies	Varies	10A	7-10 days	■	■	■	■		■
AGX HEARING	AGXssl 110	Plastic	■		Varies	Varies	10A	5-7 days	■	■	■	■	■	■
AGX HEARING	AGXssl 7	Plastic	■		Varies	Varies	10A	5-7 days	■	■	■	■	■	■
AGX HEARING	AGXssl 9	Plastic	■		Varies	Varies	10A	5-7 days	■	■	■	■	■	■
AGX HEARING	AGXssl 11	Plastic	■		Varies	Varies	10A	5-7 days	■	■	■	■	■	■
AUDIBEL	Audibel A2 Platinum	Custom Shell	■	■	Varies	Varies	10	5-7 days	■	■	■	■	■	■
AUDIBEL	Invisibel Platinum	Custom Shell	■	■	Varies	Varies	10	5-7 days	■	■	■	■	■	■
AUDIBEL	Invisibel Gold	Custom Shell	■	■	Varies	Varies	10	5-7 days	■	■	■	■	■	■
AUDIBEL	Invisibel Silver	Custom Shell	■	■	Varies	Varies	10	5-7 days	■	■	■	■	■	■
AUDIFON	elia Pico	DLP Hypoallergenic Acrylic	■		15mm	7mm	10A	120 hrs	■	■	■	■		■
AUDINA	Cue®	Custom Shell	■		12mm	9mm	10A	7-9 days	■	■	■	■		■
AUDINA	INTUITION® 12	Custom Shell	■		12mm	9mm	10A	7-9 days	■	■	■	■		■
AUDINA	INTUITION® 6	Custom Shell	■		12mm	9mm	10A	7-9 days	■	■	■	■		■
AUDINA	INTUITION® 4+	Custom Shell	■		12mm	9mm	10A	7-9 days	■	■	■	■		■
AUDINA	INTUITION® 2ER	Custom Shell	■		12mm	9mm	10A	7-9 days	■	■	■	■		■
AUDINA	INTUITION® 2FC	Custom Shell	■		12mm	9mm	10A	7-9 days	■	■	■			■
BELTONE	MicroInvisa	Acrylic	■		16mm	5mm	10A	78 hrs	■	■	■	■		■
BERNAFON	ACRIVA 9 IIC	Acrylic Photoplast S10	■		5mm	8mm	10A	111 hrs	■	■	■	■		■
MICROTECH	MicroLens 50	Custom Shell	■	■	Varies	Varies	10	5-7 days	■	■	■	■	■	■
MICROTECH	MicroLens 32	Custom Shell	■	■	Varies	Varies	10	5-7 days	■	■	■	■	■	■
MICROTECH	MicroLens 24	Custom Shell	■	■	Varies	Varies	10	5-7 days	■	■	■	■	■	■
MICROTECH	MicroLens 16	Custom Shell	■	■	Varies	Varies	10	5-7 days	■	■	■	■	■	■
MIRACLE EAR	Mirage 5200	UV	■		17mm	8mm	10A	75 hrs	■	■	■	■		■
MIRACLE EAR	Mirage 4200	UV	■		17mm	8mm	10A	75 hrs	■	■	■	■		■
MIRACLE EAR	Mirage 3200	UV	■		17mm	8mm	10A	75 hrs	■	■	■	■		■
NUEAR	Miniscopic SDS Premier	Custom Shell	■	■	Varies	Varies	10	5-7 days	■	■	■	■	■	■
NUEAR	Miniscopic Premier	Custom Shell	■	■	Varies	Varies	10	5-7 days	■	■	■	■	■	■

Invisible Hearing Aid Comparisons

Unitron Quantum Micro

Persona Olé HD

Audina Cue

Miracle Ear Mirage

Manufacturer	Model	Material	Custom Fit	Extended Wear	Minimum Length	Minimum Diameter	Battery Size	Battery Life Expectancy	Insertable by Patient	Removable by Patient	Feedback Cancellation	Noise Reduction	Remote Control	Programmable
NUEAR	Miniscopic Pro	Custom Shell	■	■	Varies	Varies	10	5-7 days	■	■	■	■	■	■
NUEAR	Miniscopic Prestige	Custom Shell	■	■	Varies	Varies	10	5-7 days	■	■	■	■	■	■
OTICON	Intiga IIC	Acrylic Plastic	■		8mm	6mm	10A	7-9 days	■	■	■	■		■
PERSONA	Ole' HD	Acrylic Plastic	■		Varies	Varies	10A	5-7 days	■	■	■	■		■
PHONAK	Lyric	Soft Foam		■	Varies	Varies	Proprietary	120 days		■			■	■
PHONAK	Virto Q90-na	Acrylic Plastic	■		Varies	Varies	10A	4-7 days	■	■	■	■	■	■
PHONAK	Virto Q70-na	Acrylic Plastic	■		Varies	Varies	10A	4-7 days	■	■	■	■	■	■
PHONAK	Virto Q50-na	Acrylic Plastic	■		Varies	Varies	10A	4-7 days	■	■	■	■	■	■
RESOUND	Verso 9 IIC	Acrylic Plastic	■		Varies	Varies	10A	3-6 days	■	■	■	■		■
RESOUND	Verso 7 IIC	Acrylic Plastic	■		Varies	Varies	10A	3-6 days	■	■	■	■		■
SIEMENS	Insio IIC 7mi	Plastic	■		Varies	Varies	10A	7 days	■	■	■	■		■
SIEMENS	Insio IIC 5mi	Plastic	■		Varies	Varies	10A	7 days	■	■	■	■		■
SIEMENS	Insio IIC 3mi	Plastic	■		Varies	Varies	10A	7 days	■	■	■	■		■
SONIC	Bliss 100	Custom Shell	■		5mm	8mm+	10A	5-8 days	■	■	■	■		■
SONIC	Charm 60	Custom Shell	■		5mm	8mm+	10A	5-8 days	■	■	■	■		■
STARKEY	SoundLens 110	Custom Shell	■	■	Varies	Varies	10	5-7 days	■	■	■	■	■	■
STARKEY	SoundLens 11	Custom Shell	■	■	Varies	Varies	10	5-7 days	■	■	■	■	■	■
STARKEY	SoundLens 9	Custom Shell	■	■	Varies	Varies	10	5-7 days	■	■	■	■	■	■
STARKEY	SoundLens 7	Custom Shell	■	■	Varies	Varies	10	5-7 days	■	■	■	■	■	■
UNITRON	Quantum² 20 Micro CIC	Acrylic Plastic	■		Varies	Varies	10A	5-7 days	■	■	■	■	■	■
UNITRON	Quantum² 16 Micro CIC	Acrylic Plastic	■		Varies	Varies	10A	5-7 days	■	■	■	■	■	■
UNITRON	Quantum² 10 Micro CIC	Acrylic Plastic	■		Varies	Varies	10A	5-7 days	■	■	■	■	■	■
UNITRON	Quantum² E Micro CIC	Acrylic Plastic	■		Varies	Varies	10A	5-7 days	■	■	■	■	■	■

Tinnitus is the sensation of noise or ringing in the ears when external sound is not present. Hearing loss and tinnitus are closely related. The sound amplification offered by hearing aids can alleviate or reduce the effects of both tinnitus and hearing loss.

DID YOU KNOW?

Premium Level Comparisons

KEY	
■	Standard
❍	Available
A	RIC
B	BTE
C	CIC
D	ITE
E	ITC
F	All Styles

Model	Style	Open Fit	Signal Processing: Memories/Situations: Number	Memories/Situations: Toggle/Button	Memories/Situations: Remote	Compression Characteristics: Channels	Compression Characteristics: Limiting Compression	Directional Microphones: Automatic or Manual	Directional Microphones: Adaptive	Directional Microphones: Fixed	Automatic Signal Processing: Noise Management: Active Noise Reduction	Noise Management: Active Speech Enhancement	Noise Management: Impulse Sound Management	Feedback Management: Gain Reduction	Feedback Management: Static Feedback Cancellation	Feedback Management: Adaptive Feedback Cancellation	Communication: Direct Audio Input	Communication: FM Integration	Wireless Compatibility: Bluetooth Compatibility	Wireless Compatibility: 2.4 GHz Compatibility	Telecoil: Automatic	Telecoil: Manual	Cros/BiCros: Wired	Cros/BiCros: Non-Wired	Ear-to-Ear Functionality
AGX HEARING																									
AGXO H310	F				❍	10	■	Both	■	❍	■	■	■	❍	❍	■	❍	❍	❍		❍	❍	❍		■
AGXO H330	F	❍	1-4	❍	❍	10	■	Both	■	❍	■	■	■	❍	❍	■	❍	❍	❍		❍	❍	❍		■
AGXs3s i110	F	❍	4	❍	❍	16	■	Either		■	■	■			■	■	❍	■	■		■	■			■
AGXs3s i90	F	❍	4	❍	❍	12	■	Either		■	■	■			■	■	❍	■	■		■	■			■
AGXswi i110	A,C,D,E	❍	4	❍	■	16	■	Either		■	■	■			■	■	❍	■	■		■	■			■
AGXswi i90	A,C,D,E	❍	4	❍	■	12	■	Either		■	■	■			■	■	❍	■	■		■	■			■
AUDIBEL																									
Audibel A2 Wireless Platinum	F	❍	4	❍	❍	16	■	Either		■	■	■			■	■	❍	■	■		■	■			■
Audibel A2 Wireless Gold	F	❍	4	❍	❍	12	■	Either		■	■	■			■	■	❍	■	■		■	■			■
Range Platinum	A,C,D,E	❍	4	❍	■	16	■	Either		■	■	■			■	■	❍	■	■		■	■			■
Range Gold	A,C,D,E	❍	4	❍	■	12	■	Either		■	■	■			■	■	❍	■	■		■	■			■
Audibel A2 Tinnitus	A	❍	4	❍		12	■	Either		■	■	■			■	■	❍	■			■	■			
AUDIFON																									
elia CIC	C		6+	❍		8	■		■	■	■			■		■					❍	❍			
elia ITE/ITC	D,E		6+	❍		8	■	Manual	■	■	■			■		■					❍	❍			
elia P	C,D,E		6+	❍		8	■				■			■		■					❍	❍			
elia R	A		6+			8	■	Manual	■	■	■			■		■									
elia XS	B	❍	6+	■		8	■	Manual	■	■	■			■		■					■	■			
elia S	B	❍	6+	■		8	■	Manual	■	■	■			■		■	❍				■	■			
elia M	B	❍	6+	■		8	■	Manual	■	■	■			■		■	❍				■	■			
eox	D,E		6+	❍	❍	8	■	Manual	■	■	■			■		■		■	■		❍		■	■	
eox S	B	❍	6+	■	❍	8	■	Manual	■	■	■			■		■	❍	■	■		■		■	■	
eox M	B	❍	6+	■	❍	8	■	Manual	■	■	■			■		■	❍	■	■		■		■	■	
AUDINA																									
flx12®	B	■	4	■		12	■	Both	■		■	■	■			■						■			
flx6®	B	■	4	■		6	■	Both	■		■	■	■			■						■			
INTUITION® 12	C,D,E		4	❍		12	■	Both	■		■	■	■			■					❍	❍			
INTUITION® 6	C,D,E		4	❍		6	■	Both	■		■	■	■			■					❍	❍			
SPARO® 12	B	■	4	■		12	■	Both	■		■	■	■			■		❍				❍			
IRIC 12	A	■	4	■		12	■	Both	■		■	■	■			■						■			
IRIC 6	A	■	4	■		6	■	Both	■		■	■	■			■						■			
BELTONE																									
Promise 17	F	❍	1 or 4	❍	❍	17	■	Both	■	■	■	■	■			■	❍		❍	■	❍	❍	❍		❍
True 17	F	❍	1 or 4	❍	❍	17	■	Both	■	■	■	■	■			■	❍		❍	■	❍	❍	❍		
BERNAFON																									
ACRIVA 9 NANO RITE	A	❍	7	■	❍	ChannelFree™	■	Automatic	■	❍	■	■	■			■			■		■	■			■
ACRIVA 9 NANO	B	❍	6	■	❍	ChannelFree™	■	Automatic	■	❍	■	■	■			■			■						■
ACRIVA 9 BTE CP/CPX	B	❍	8	■	❍	ChannelFree™	■	Automatic	■	❍	■	■	■			■	❍	❍	■		■	■			■
ACRIVA 9 ITED/ITCDP/ITCD	D,E		7	❍	❍	ChannelFree™	■	Automatic	■	❍	■	■	■			■			■		❍	❍			■
ACRIVA 9 ITC/CICP/CIC	C,E		4	❍		ChannelFree™	■				■	■	■			■					❍	❍			
ACRIVA 7 NANO RITE	A	❍	7	■	❍	ChannelFree™	■	Automatic	■	❍	■	■	■			■			■		■	■			■

Premium Level Comparisons

KEY	
■	Standard
❍	Available
A	RIC
B	BTE
C	CIC
D	ITE
E	ITC
F	All Styles

Model	Style	Open Fit	Signal Processing: Memories/Situations: Number	Memories/Situations: Toggle/Button	Memories/Situations: Remote	Compression Characteristics: Channels	Compression Characteristics: Limiting Compression	Directional Microphones: Automatic or Manual	Directional Microphones: Adaptive	Directional Microphones: Fixed	Automatic Signal Processing: Noise Management: Active Noise Reduction	Noise Management: Active Speech Enhancement	Noise Management: Impulse Sound Management	Feedback Management: Gain Reduction	Feedback Management: Static Feedback Cancellation	Feedback Management: Adaptive Feedback Cancellation	Communication: Direct Audio Input	Communication: FM Integration	Wireless Compatibility: Bluetooth Compatibility	Wireless Compatibility: 2.4 GHz Compatibility	Telecoil: Automatic	Telecoil: Manual	Cros/BiCros: Wired	Cros/BiCros: Non-Wired	Ear-to-Ear Functionality
BERNAFON (continued)																									
ACRIVA 7 NANO	B	❍	6	■	❍	ChannelFree™	■	Automatic	■	❍	■	■	■			■			■						■
ACRIVA 7 BTE CP/CPx	B	❍	8	■	❍	ChannelFree™	■	Automatic	■	❍	■	■	■			■	❍	❍	■		■	■			■
ACRIVA 7 ITED/ITCPD/ITCD	D,E		7	❍	❍	ChannelFree™	■	Automatic	■	❍	■	■	■			■			■		❍	❍			■
ACRIVA 7 ITC/CICP/CIC	C,E		4	❍		ChannelFree™	■				■	■	■			■					❍	❍			
EAR-TRONICS																									
Ethos BTE 312	A,B	❍	8	■		8	■	Manual	■	■	■					■			■	■	❍	■			
Ethos BTE 13 Mini	A,B	❍	8	■		8	■	Manual	■	■	■					■			■	■	❍	■			
Ethos BTE 13	B	❍	8	■		8	■	Manual	■	■	■					■			■	■	❍	■			
Overtus ITE	C,D,E	❍	8	■		8	■	Manual	■	■	■					■			■	■	❍	■			
HANSATON																									
Antaro	F	❍	6	❍	❍	18	■	Automatic	❍		■	■	■			■		❍	❍		❍	❍			❍
AQ First Class Rechargeable	A,B,D,E	❍	6	❍	❍	18	■	Automatic	❍		■	■	■			■		❍	❍		❍	■			❍
MICROTECH																									
Propel w50	F	❍	4	❍	❍	16	■	Either		■	■	■			■	■	❍	■	■		■	■			■
Propel w40	F	❍	4	❍	❍	12	■	Either		■	■	■			■	■	❍	■	■		■	■			■
Mobility 50	A,C,D,E	❍	4	❍	■	16	■	Either		■	■	■			■	■	❍	■	■		■	■			■
Mobility 40	A,C,D,E	❍	4	❍	■	12	■	Either		■	■	■			■	■	❍	■	■		■	■			■
Propel Tinnitus	A	❍	4	❍		12	■	Either		■	■	■			■	■	❍	■			■	■			
MIRACLE EAR																									
ME 5200	F	❍	6	❍	❍	48	■	Automatic	■		■	■	■			■	❍		■		❍	❍			■
NUEAR																									
NuEar SDS Wireless Premier	F	❍	4	❍	❍	16	■	Either		■	■	■			■	■	❍	■	■		■	■			■
NuEar SDS Wireless Pro	F	❍	4	❍	❍	12	■	Either		■	■	■			■	■	❍	■	■		■	■			■
LOOK Premier	A,C,D,E	❍	4	❍	■	16	■	Either		■	■	■			■	■	❍	■	■		■	■			■
LOOK Pro	A,C,D,E	❍	4	❍	■	12	■	Either		■	■	■			■	■	❍	■	■		■	■			■
NuEar SDS Tinnitus	A	❍	4	❍		12	■	Either		■	■	■			■	■	❍	■			■	■			
OTICON																									
Alta Pro	F	❍	1-4	❍	❍	10	■	Both	■	❍	■	■	■	❍	❍	■	❍	❍	❍		❍	❍	❍		■
Alta	F				❍	10	■	Both	■	❍	■	■	■	❍	❍	■	❍	❍	❍		❍	❍	❍		■
Chili SP 9	B		1-4	❍	❍	9	■	Both	■	❍	■	■	■	❍	❍	■	❍	❍	❍		❍	❍	❍		■
Intiga 10	A	■	1-4		❍	10	■	Both	■	❍	■	■	■	❍	❍	■		❍	❍						■
PERSONA																									
Ole'	F	❍	5	■		8	■	Both	❍		■	■	■			■			❍		❍	❍			
Evok 900	F	❍	5	■		8	■	Both	❍		■	■	■			■	❍		❍		❍	❍			
PHONAK																									
Audéo Q90-10	A	❍	5			20	■	Automatic	■		■	■	■			■									
Audéo Q90-312	A	❍	5	■	❍	20	■	Automatic	■		■	■	■			■	❍	❍	■					❍	■
Audéo Q90-312T	A	❍	5	■	❍	20	■	Automatic	■		■	■	■			■	❍	❍	■		■	■		❍	■
Bolero Q90-M312	B	❍	5	■	❍	20	■	Automatic	■		■	■	■			■	❍	❍	■		■	■	❍	❍	■
Bolero Q90-M13	B	❍	5	■	❍	20	■	Automatic	■		■	■	■			■	❍	❍	■		■	■	❍	❍	■
Bolero Q90-P/SP	B	❍	5	■	❍	20	■	Automatic	■		■	■	■			■	❍	❍	■		■	■	❍	❍	■

Premium Level Comparisons

KEY	
■	Standard
❍	Available
A	RIC
B	BTE
C	CIC
D	ITE
E	ITC
F	All Styles

Model	Style	Open Fit	Signal Processing: Memories/Situations: Number	Toggle/Button	Remote	Compression Characteristics: Channels	Limiting Compression	Directional Microphones: Automatic or Manual	Adaptive	Fixed	Automatic Signal Processing: Noise Management: Active Noise Reduction	Active Speech Enhancement	Impulse Sound Management	Feedback Management: Gain Reduction	Static Feedback Cancellation	Adaptive Feedback Cancellation	Communication: Direct Audio Input	FM Integration	Wireless Compatibility: Bluetooth Compatibility	2.4 GHz Compatibility	Telecoil: Automatic	Manual	Cros/BiCros: Wired	Non-Wired	Ear-to-Ear Functionality
PHONAK (continued)																									
Naída Q90-RIC	A	❍	5	■	❍	20	■	Automatic	■		■	■	■			■	❍	❍	■		■	■	❍	❍	■
Naída Q90-SP/UP	B		5	■	❍	20	■	Automatic	■		■	■	■			■	❍	❍	■		■	■	❍	❍	■
Virto Q90-nano	IIC*	❍	5		❍	20	■				■	■	■			■	❍	❍							
Virto Q90-312/13	C,D,E	❍	5	■	❍	20	■	Automatic	■		■	■	■			■	❍	❍	■		■	■		❍	■
RESOUND																									
Verso 9 / 9TS	F	❍	8	■	❍	17	■	Both	■	■	■	■	■		■	■	■		■	■	■	❍			■
Verso 7 / 7TS	F	❍	8	■	❍	17	■	Both	■	■	■	■	■		■	■	■		■	■	■	❍			■
Verso 5	F	❍	8	■	❍	9	■	Both	■	■	■	■	■		■	■	■		■	■	■	❍			■
Alera 9 / 9TS	F	❍	8	■	❍	17	■	Both	■	■	■	■	■		■	■	■		■	■	■	❍			
Alera 7 / 7TS	F	❍	8	■	❍	17	■	Both	■	■	■	■	■		■	■	■		■	■	■	❍			
Alera 5 / 5TS	F	❍	8	■	❍	9	■	Both	■	■	■	■	■		■	■	■		■	■	■	❍			
REXTON																									
Strata 18	A	■	6	■	❍	36	■	Automatic	■	■	■	■	■			■	❍		■		■	■			■
Charismo 18	A	■	6	■		36	■	Automatic	■	■	■	■	■			■									
Finesse 18	B,C,D,E	■	6	■	❍	36	■	Automatic	■	■	■	■	■			■	❍		■		■	■	❍		■
Strata 16	A	■	6	■	❍	32	■	Automatic	■	■	■	■	■			■	❍		■		■	■			■
Accord 16	B,C,D,E	■	6	■	❍	32	■	Automatic	■	■	■	■	■			■	❍		■		■	■	❍		■
Onyx12+	A	■	5	■	❍	12	■	Automatic	■		■	■	■			■	❍		■		■	■			■
SIEMENS																									
Pure 7mi	A	❍	6	■	❍	48	■	Automatic	■		■	■	■			■	❍		❍		■	■			■
Motion 7mi	B	❍	6	■	❍	48	■	Automatic	■		■	■	■			■	❍		❍		■	■			■
Life 7mi	B	■	6	■	❍	48	■	Automatic	■		■	■	■			■	❍		❍			❍			■
Insio 7mi	C,D,E		6	■	❍	48	■	Automatic	■		■	■	■			■	❍		❍		❍	❍			❍
Aquaris 7mi	B	❍	6		❍	48	■	Automatic	■		■	■	■			■	❍		❍			❍			■
Nitro 7mi	B,C,D,E		6	■	❍	48	■	Automatic	■		■	■	■			■	❍		❍		■	■			■
Ace 7mi	A	❍	6	■		48	■	Automatic	■		■	■	■			■									
SONIC																									
Flip 100	A	■	4	■	❍		■	Automatic	■	■	■	■	■			■			■		■	■			■
Bliss 100	B,C,D,E	❍	4	❍	❍		■	Automatic	❍	❍	■	■	■			■	❍		■		❍	❍			■
STARKEY																									
Xino Wireless i110	A	❍	4	❍	■	16	■	Either		■	■	■			■	■	❍	■	■						■
Xino Wireless i90	A	❍	4	❍	■	12	■	Either		■	■	■			■	■	❍	■	■						■
3 Series i110	F	❍	4	❍	❍	16	■	Either		■	■	■			■	■	❍	■	■		■	■			■
3 Series i90	F	❍	4	❍	❍	12	■	Either		■	■	■			■	■	❍	■	■		■	■			■
Wi Series i110	A,C,D,E	❍	4	❍	■	16	■	Either		■	■	■			■	■	❍	■	■		■	■			■
Wi Series i90	A,C,D,E	❍	4	❍	■	12	■	Either		■	■	■			■	■	❍	■	■		■	■			■
Xino 110	A	❍	4	❍	■	16	■	Either		■	■	■			■	■	❍	■			■	■			
Xino 90	A	❍	4	❍	■	12	■	Either		■	■	■			■	■	❍	■			■	■			
Xino Tinnitus	A	❍	4	❍		12	■	Either		■	■	■			■	■	❍	■			■	■			
UNITRON																									
Moxi Pro	A	❍	4	■	❍	20	■	Both	■		■	■	■			■	■		■		■	■			■

* Invisible hearing aid styles - See article on page 22 for more information.

Premium Level Comparisons

KEY	
■	Standard
❍	Available
A	RIC
B	BTE
C	CIC
D	ITE
E	ITC
F	All Styles

Model	Style	Open Fit	Signal Processing: Memories/Situations: Number	Toggle/Button	Remote	Compression Characteristics: Channels	Limiting Compression	Directional Microphones: Automatic or Manual	Adaptive	Fixed	Automatic Signal Processing: Noise Management: Active Noise Reduction	Active Speech Enhancement	Impulse Sound Management	Feedback Management: Gain Reduction	Static Feedback Cancellation	Adaptive Feedback Cancellation	Communication: Direct Audio Input	FM Integration	Wireless Compatibility: Bluetooth Compatibility	2.4 GHz Compatibility	Telecoil: Automatic	Manual	Cros/BiCros: Wired	Non-Wired	Ear-to-Ear Functionality
UNITRON (continued)																									
Moxi Kiss Pro	A	❍	4		❍	20	■	Both	■		■	■	■		■	■			■						■
Quantum Pro	B,D,E	❍	4	■	❍	20	■	Both	■		■	■	■		■	■	❍	❍	■		❍	❍	❍		■
WIDEX																									
Dream 440 Fusion	A	■	6	■	❍	15	■	Automatic	■		■	■	■			■		❍	■			■		❍	■
Dream 440 Passion	A	■	6		❍	15	■	Automatic	■		■	■	■			■		❍	■					❍	■
Dream 440 Fashion	B	■	6	■	❍	15	■	Automatic	■		■	■	■			■		❍	■			■		❍	■
Dream 440 9	B	■	6	■	❍	15	■	Automatic	■		■	■	■			■	■	❍	■			■		❍	■
Dream 440 M	B	■	6		❍	15	■	Automatic	■		■	■	■			■		❍	■					❍	■
Dream 440 CIC	C		6		■	15	■				■	■	■			■		❍	■					❍	■
Dream 440 Custom	D, E		6		❍	15	■	Automatic	■		■	■	■			■		❍	■			■		❍	■
Super 440	A		6	■	❍	15	■	Automatic	■		■	■	■			■	❍	❍	■			■			■

How Custom Hearing Aids Are Made

Several hearing aid manufacturers now employ CAD/CAM (computer aided design + computer aided manufacturing) to produce their custom hearing aid shells. CAD/CAM replaces the labor-intensive lost-wax casting method.

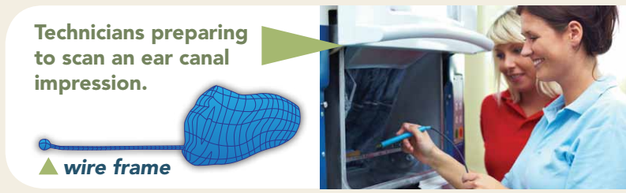
The process begins with a well-made impression of the patient's ear canal. This becomes the original model. The ear impression is placed into the center of a 3D scanner box where a narrow laser beam scans across the impression from many positions angled inside the scanner box. Thousands of data points are created and a "wire frame" skeleton of the impression is generated. The computer finishes the virtual reproduction and a digital image of the impression appears.

The next step is modeling of the virtual shell to contain the components. Everyone's ear canal is a different size and shape. It takes careful planning to fit all parts into the tiny hearing aid shell. With the virtual hearing aid shell, the technician will experiment with different placements of the digital chip, microphone, receiver, vent, faceplate, receiver tubing, wax guards, and battery. The best possible fit is achieved in this way.

Production of a hearing aid shell is called "Printing," because the computer "prints" onto the material that is used to make the shell. Layer by layer, 1/10 millimeter at a pass, the hearing aid shell is formed.

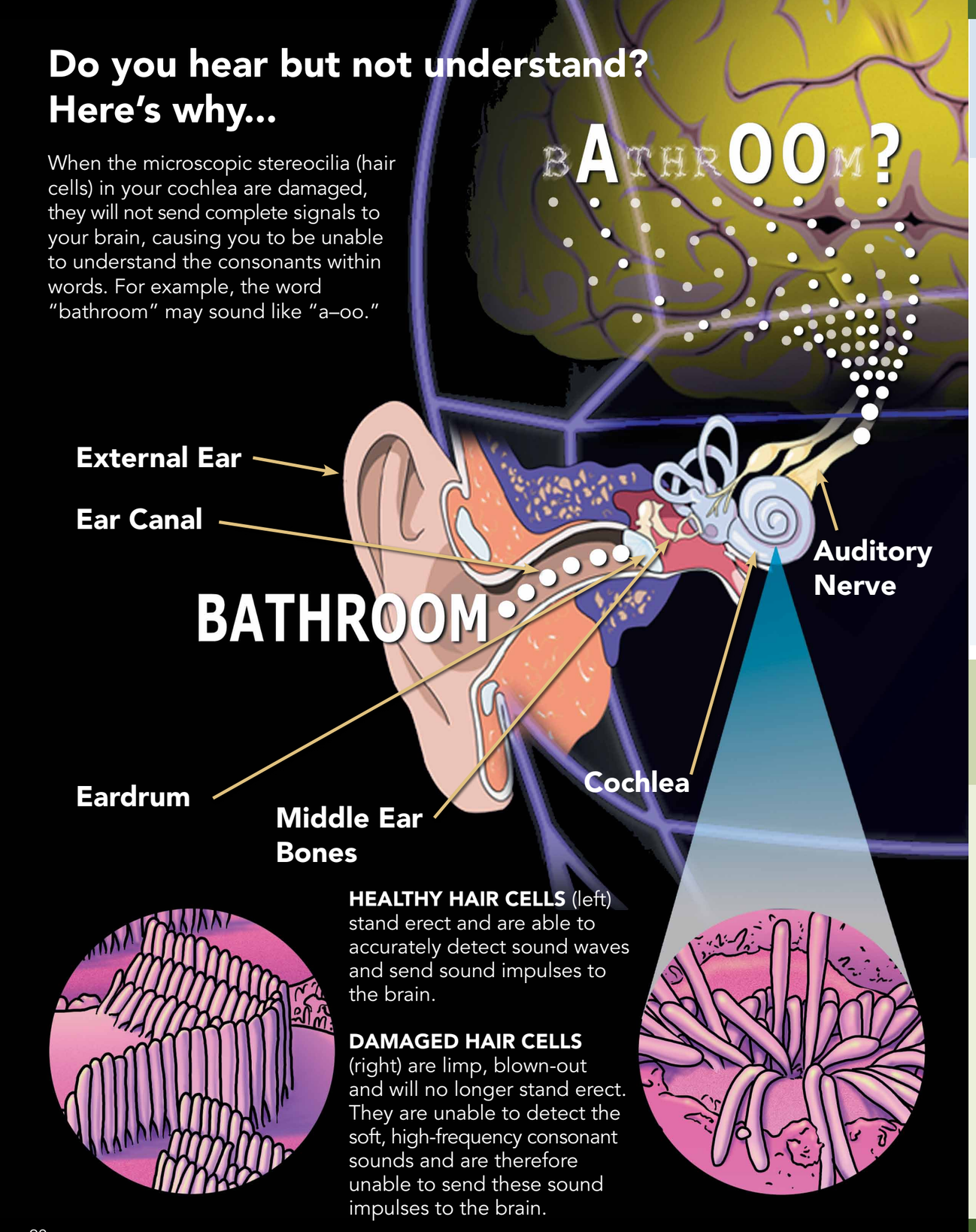
Components are installed as the technician inserts the designed-to-fit component module into the shell. Component placement with the conventional lost-wax method many times required hollowing-out the shell with a dental drill until components would all fit.

The benefits of CAD/CAM hearing aid shell production are improved comfort, better acoustics, more gain possible without feedback, eliminates the need for additional ear impressions, uniform shell thickness, increased efficiency in production, perfect placement of components without kinks or pinched wires, and accuracy obtaining an exact replica of the patient's inner ear canal. The result for the patient is a perfect fit.



Do you hear but not understand? Here's why...

When the microscopic stereocilia (hair cells) in your cochlea are damaged, they will not send complete signals to your brain, causing you to be unable to understand the consonants within words. For example, the word "bathroom" may sound like "a–oo."



HEALTHY HAIR CELLS (left) stand erect and are able to accurately detect sound waves and send sound impulses to the brain.

DAMAGED HAIR CELLS (right) are limp, blown-out and will no longer stand erect. They are unable to detect the soft, high-frequency consonant sounds and are therefore unable to send these sound impulses to the brain.

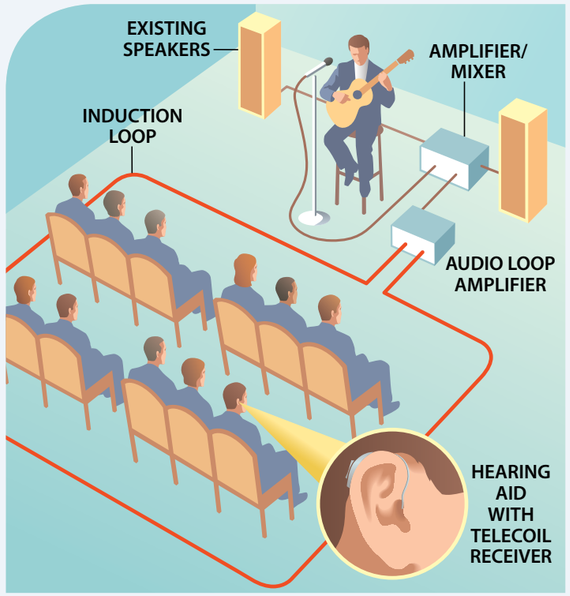
Get in the Clarity Loop with T-Coils

Looping is a technology that greatly improves the listening experience of hearing aid users with telecoils – at home and in public places.

In places such as auditoriums, classrooms or media rooms, a signal is transmitted through a special amplifier to a hidden wire that surrounds, or "loops," the audience. This wire sends a magnetic signal throughout this zone to anyone's hearing aids equipped with telecoils (t-coils).

A t-coil is a small, inexpensive coil of wire inside a hearing aid that allows it to become a wireless receiver. When using the t-coil setting, you push a button to turn off the microphones so the hearing aids will only pick up the direct electromagnetic signal. This can also be automatic.

Looping + t-coil technology connects the listener directly to the sound source while most background noise is eliminated, greatly improving understanding of dialogue and music. A universal symbol (right) identifies buildings equipped with looping technology.



Hearing Problems

Hearing problems are grouped according to the location of the damage or defect.

Sensorineural

Also known as nerve-type hearing loss, this type of gradually-diminished hearing is commonly associated with the aging process. Due to hair cell (stereocilia) damage within the cochlea, the auditory nerve cannot deliver signals to the brain correctly. This causes sounds to be distorted and certain consonants to be missed.

Patients may complain that people seem to mumble or that they hear but do not understand. Approximately 80 percent of adult patients with complaints of hearing problems suffer from this type of loss. Sensorineural losses may be helped with proper assessment and fitting of hearing aids.

Combined or ***Mixed***

Conductive

This type of hearing loss occurs when sound is inadequately conducted through the external or middle ear to the inner ear. The overall intensity (loudness) of sound is diminished, but sound clarity is usually intact if sufficient volume is present.

Approximately 20 percent of patients with complaints of hearing problems suffer from this type loss. Conductive losses may be helped with hearing aids or medical or surgical intervention. Conductive hearing loss may occur along with sensorineural loss or alone.

Definitions of Hearing Aid Terms

adaptive directional microphones - directional microphone system which, when activated, can adapt based on the location of noise.

adaptive feedback cancellation - a digital process which creates a filter within the amplifier of the hearing aid to cancel feedback the moment it is detected without reducing or altering the hearing aid's response. The filter will automatically change (or adapt) if the feedback is caused by a different or changing situation.

ASP (BILL Circuitry) - stands for Automatic Signal Processing Bass Increases at Low Levels. This circuit also decreases the bass at high levels. BILL circuitry is often marketed under the trademark name "Manhattan" circuit. BILL circuitry is intended for wearers who frequently find themselves in noisy environments, especially environments where low frequency noise is a constant factor. Harsh or shrill sounds are not amplified, but are actually reduced by this circuit.

ASP (PILL Circuitry) - stands for Automatic Signal Processing Programmable Increases at Lower Levels. This type of circuitry is more versatile than TILL or BILL circuitry because it can be programmed by computer to automatically perform as a BILL circuit on one channel and a TILL circuit on another. The user can switch between circuits as listening environments change.

ASP (TILL Circuitry) - stands for Automatic Signal Processing Treble Increases at Low Levels. This circuit also decreases the high frequency volume at high levels. TILL circuitry is often marketed under the trademark name "K-AMP." TILL circuitry is intended for wearers who need more volume to hear the quiet sounds than they do for loud sounds. Harsh or shrill sounds are not amplified, but pass through the circuit unaltered.

audiogram - a graph on which to record the auditory threshold by frequency of a patient's hearing.

audiology - the science or study of hearing.

audiometry - the measurement of hearing.

aural - having to do with the ear or hearing.

auditory nerve - connects the inner ear and the brain; serves in hearing and balance.

automatic directional microphones - directional microphone technology that is automatically engaged or disengaged without user direction.

automatic signal processing (ASP) - the family of hearing aid circuits which automatically change the gain (volume) and frequency response (tones such as bass, midrange and treble) as a function of the sound entering the hearing aid microphone.

BiCROS - stands for Bilateral Contralateral Routing of Signal. A hearing aid with two microphones, one at each ear and one receiver. Used for hearing aid wearer who has one aidable ear and one that is not aidable.

Bluetooth® wireless technology - allows digital hearing instruments to communicate wirelessly.

body hearing aid - a hearing aid with a microphone, amplifier, and battery worn on the chest and connected to an ear-worn receiver with a cord.

BTE - a behind-the-ear hearing aid system.

canal hearing aid - a custom hearing aid that fits mostly in the ear canal with a small part extending into the concha area.

class A circuits - have as their defining feature the characteristic of amplifying loud sounds and quiet sounds with equal intensity. For this reason, some patients may find that class A circuits provide either too little sound or too much sound to comfortably reach a listening comfort for their particular hearing loss. The class A circuit provides basic linear amplification and is found in lower priced hearing aids.

cochlea - part of the inner ear that is shaped like a snail. Vibrations in the fluid-filled cochlea cause tiny hair cells to vibrate and generate nerve impulses that then travel to the brain.

completely-in-the-canal hearing aid (CIC) - one of the smallest hearing aids which fits beyond the visual opening of the ear canal. Also called deep canal hearing aid.

compression amplification - has as its defining feature the characteristic of decreasing (or compressing) volume as the loudness of sound increases at the hearing aid user's ear. The goal of compression amplification is to deliver a more natural loudness throughout the wearer's entire listening range without under-amplification or over-amplification.

CROS - stands for Contralateral Routing of Signal. A hearing aid designed for a person with normal hearing in one ear and an unaidable ear on the other side.

dB - decibel, a unit for measuring and describing sound intensity or loudness; named after Alexander Graham Bell.

digital hearing aid - an instrument that converts the electric signal from the microphone to digital values for processing, then converts them back to electric signals for the ear.

direct audio input - the hearing aid has a jack to receive sound directly from another device such as a TV or personal entertainment system.

directional microphone - a microphone that is more sensitive to sound approaching from one direction.

dynamic range - the difference in dB between the threshold of hearing and discomfort level.

earmold - an impression of your ear canal used to mold the shell of the hearing aid. It is made using silicone or other impression material.

ear-to-ear - when two hearing aids communicate between each other. For example, when you change the channel or volume on one hearing aid, it automatically adjusts the other as well.

expansion technology - a digital process which allows the hearing aid to provide less gain for sounds that are softer than conversational speech. This improves the quality of sound from the hearing aid when worn in quiet situations by reducing low level noise.

external receiver - an instrument design which features a processor worn behind the ear and a speaker inserted in the ear canal.

feedback - the squeal produced when sound that has been amplified is picked up by the microphone and reamplified in a loop.

filter - a device that allows some frequencies to pass through while others are attenuated (as in high pass, low pass, band pass, high cut, low cut).

FM integration - the hearing aid contains an FM receiver to pick up signals from an FM transmitter. There is no additional hardware to plug into the hearing aid. The transmitter can be given to a speaker at a lecture or in a noisy situation in order to isolate the speaker's voice.

frequency - the number of complete oscillations per unit of time, measured in number of cycles per second and expressed in Hertz (Hz).

gain - the amount in dB that the sound has been increased.

gain control - a device which allows the gain to be adjusted (such as volume control or potentiometer).

gain reduction- used in multi-channel hearing aids to automatically lower the gain in a specific channel in order to control feedback.

hearing aid - also called hearing instrument, means any wearable instrument or device designed for, or represented as, aiding, improving or correcting defective human hearing.

helix - shell style with a free field design allowing for maximum venting of the ear canal.

high pass filter - a filter which allows high frequencies to pass through and attenuates low frequencies.

impulse sound management - Isolates sudden, jarring noises and tones them down without effecting normal sound ranges.

Induction Loop System (loop)- the broadcasting end of a system that enables people using hearing aids (with a telecoil) to hear sounds projected in theaters, cinemas, auditoriums, etc that are equipped with an induction loop system.

in-the-ear hearing aid (ITE) - a custom hearing aid which fits entirely in the concha bowl of the ear (same as full shell).

in-the-canal hearing aid (ITC) - same as canal hearing aid.

invisible-in-the-canal (IIC) - ultra small hearing aid designed to fit deep in the ear canal, completely out of sight.

K-AMP circuit (TILL) - causes the Treble to Increase at Low Levels and to decrease at high levels. Named after its inventor, Dr. Mead Killion, this circuit is designed to amplify more in quiet environments and less in loud environments. It was designed for people who need amplification for soft sounds but who hear loud sounds normally. The K-AMP circuit regulates the volume automatically and does not amplify loud sounds.

kneepoint - also called compression threshold. It is the point, in sound decibels, that a compression circuit begins to reduce the gain. Some circuits allow this point to be digitally programmed, being customized to the user's need.

limiting compression circuits - automatically limit volume as it enters the hearing aid microphone. This circuit is designed for patients who have mild to moderately severe, sharply or gently sloping high frequency and flat losses.

linearity - the condition where a change in input level causes a similar change in output.

low pass filter - a filter that allows low frequencies to pass through and attenuates high frequencies.

low profile – shell size of hearing aid that is between the full ITE and the half shell.

mixed hearing loss - a hearing loss which is a combination of conductive and sensorineural impairments.

multi-channel adaptive directional microphones - an adaptive directional microphone system which can manage multiple noise sources at the same time.

multiple directional microphone - see omni-directional microphone.

multi-channel technology - technology which electronically separates the incoming sound into bands and adjusts the sound intensity in each band independently. The benefit is a hearing aid that more finely tailors the frequency response and compression characteristics to each user's unique hearing needs.

narrow band filter - a filter which allows a specific restricted frequency range to pass through while attenuating adjacent frequencies on each side of the filter.

noise management - a digital process which automatically alters the response of the hearing aid in a noisy situation in order to ensure the listener's comfort.

non-programmable multi-channel - technology which electronically separates the incoming sound into bands and adjusts the sound intensity in each band independently. The benefit is a hearing aid that more finely tailors the frequency response and compression characteristics to each user's unique hearing needs. These hearing aids are adjusted manually by a potentiometer.

omni-directional microphone - also called multiple directional microphone. A microphone which picks up sound from all directions.

open-fit - a class of hearing aids that do not occlude the ear canal.

potentiometer - a volume wheel or screw set control which allows for fine adjustments to a hearing aid.

presbycusis - a sensorineural hearing loss related to aging.

probe microphone - a microphone with a long tube which is used in Real-Ear testing.

programmable circuitry - a feature which allows the hearing aid to be digitally programmed using a computer. Advantages are preciseness of electroacoustic adjustments at the time of the fitting and ease of access to different types of signal processing for different listening conditions.

ratio (compression ratio) - the degree to which loud sounds are reduced. It is a ratio relationship, A:B, where A is the amount of original gain into the hearing aid and B is the amount of gain applied after compression.

real ear testing - the measurement of sound in the ear canal by means of a probe tube and computerized equipment.

rechargeable - a hearing instrument designed with a rechargeable battery.

receiver-in-canal (RIC) - a behind-the-ear hearing aid employing a separate receiver worn in the ear canal and connected with a thin wire.

remote volume control - wireless, remote control device that allows the user to adjust the hearing aid.

speech discrimination - a test which measures the subject's ability to distinguish words.

speech recognition threshold (SRT) - the lowest level at which the subject can correctly repeat spondaic (two syllable) words.

static feedback cancellation - a digital process which creates a filter in the hearing aid amplifier and is programmed into the hearing aid during the fitting. The filter cancels feedback that is occurring at that time. The filter will continue to cancel feedback that occurs in the same situation, but will not adapt to changing situations.

telecoil (t-coil) - a small, inexpensive coil of wire inside a hearing aid that allows it to become a wireless receiver. When using the t-coil setting, you push a button to turn off the microphones so the hearing aids will only pick up the direct electromagnetic signal. This process can also happen automatically.

threshold - the level above which the subject gives a positive response and below which the subject does not give a response.

tinnitus - the sensation of noise or ringing in the ears when an external sound is not present.

toggle - a switch on a hearing aid that allows the user to employ different memories for different listening situations. One memory might be set for a quiet office, while another may be set for a noisy restaurant.

tympanogram - a graphical representation of the changes in acoustic immittance of the middle ear in response to changes in pressure.

tympanometry - the measurement of sound flowing through the middle ear in response to changes in pressure.

variable release compression - compression technology which reduces volume in loud circumstances continuously until the sound falls below a predetermined decibel level. With a long, loud sound, release is delayed based on the decibel level entering the hearing aid. The benefit is that it virtually eliminates the "pumping" sound associated with peak clipping in more primitive compression circuits. This circuit helps the user obtain comfortable listening in various levels of noise.

vent - a hole drilled the length of an earmold or ITE shell to allow sound to escape.

video otoscope - a miniaturized camera that the hearing professional inserts into the subject's ear to view and photograph the ear canal and eardrum.

wireless technology - technology that allows digital instruments to wirelessly communicate information.

Copyright © 2014 James Wilson Group Strategic Solutions, L.P. USA.
No part of this publication may be reproduced, stored in a retrieval system or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, without prior written permission from James Wilson Group Strategic Solutions, L.P. (817) 831-0591
theconsumersguides.com