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THE DIGITAL
REVOLUTION—
YOUR GATEWAY
TO IMPROVED
HEARING.



INTERTON

SATISFACTION WILL BE WRITTEN ALL OVER YOUR FACE.



It probably took some resolve to take that first step and have your hearing tested. You probably had family members and friends tell you that you should get your hearing checked because, while you could hear them talking, you didn't understand everything that was being said. Now your hearing healthcare professional has confirmed what you suspected all along - your hearing is not as good as it used to be. Since hearing loss is so gradual, it's understandable that it took a while for you to get tested. But, you have taken the first crucial step to avoid the social isolation that accompanies poor hearing. A person who does not understand what they hear feels like an outsider, lessening the quality of life. Fortunately, it doesn't have to be this way. Interton has the technology that can help add more satisfaction to your life.

GETTING THE HELP YOU NEED

More than 28 million Americans suffer from hearing impairments, but only 20% seek help for their hearing loss.* The initial stages of hearing loss occur earlier in life than we may think but typically go unnoticed. Most commonly, the ability to hear higher frequency sounds, such as a child's voice or the phone ringing, decreases. Also, consonants such as F, T, and S do not arrive completely in the auditory center of the brain anymore. What was understood becomes only a fraction of what was said. Originally, our hearing was not designed for the extreme noise of a jet airliner, but rather for the reception of quieter sounds. The earlier you consult with a hearing professional and have an Interton hearing aid fitted just for you, the better you can manage your hearing loss.

**Joint Statement of the American Speech-Language-Hearing Association and the American Academy of Otolaryngology-Head and Neck Surgery*

DIAGNOSIS TO IMPROVE LIFE

Our senses have a limited capability to withstand increasing stress. It's well known that loud noise will permanently damage our hearing ability. Most people are still able to hear loud sounds well, but middle and higher frequency sounds become progressively more difficult to hear. Hearing loss varies by individual and only a hearing test can determine to what level your hearing may be impaired. A person's lifestyle, level of hearing loss, and personal preference will determine which hearing solution works best.



WHAT IS "HEARING" ANYWAY?

To understand what hearing aids have to accomplish we first of all have to think about how our hearing operates.

Hearing is basically a three-step process:

1. Sound waves enter the ear.
2. Sound is processed.
3. The sound is then transmitted by the auditory nerve to the brain.

Sound waves transfer the acoustical signals to the outer ear (canal) and transport them from the eardrum to the middle ear. The eardrum starts to vibrate and transmits the sound waves through the interlinked auditory ossicles hammer, anvil and stirrup further into the inner ear—that is where the sensitive cochlea is located, the key organ for hearing.

20 Legions Of Hair

About 20,000 nerve cells, also called hair cells because of their fine hair-like structure, are positioned in the lymph fluid. The tips of the hair cells contact the lymph fluid. When vibrations are transferred in the inner ear, the fluid starts to move, bending the tiny hair follicle. The miracle of hearing results when electrical impulses are then transferred, like a code, through the auditory nerve into the brain where it is interpreted as sound.

Whether it's the spoken word or the resonant melody of a symphony, it's what we know and have learned throughout our life that tells us what these sounds mean.

Good Hair Gone Bad

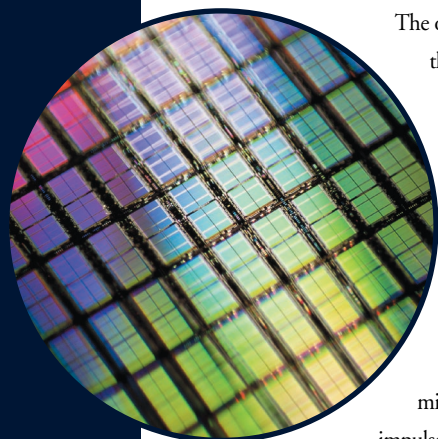
The ultra-fine nerve hairs can be irreparably damaged through a lifetime of strain.

Whether through normal wear and tear, noise at the work place, or too much strain on the ear during other activities, time and noise takes its toll on the auditory system. Loud noise sweeps over the hair cells like a hurricane and can snap them like matchsticks.

Unfortunately, there is no therapy available today that can reverse this effect.



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Enter The Hearing Aid

The operation of a hearing aid today is remarkably similar to the three-step process of hearing itself.

1. Sound waves enter the hearing aid.
2. Sound is processed.
3. Sound is then channeled through the canal, to the auditory nerve to be processed and passed on to the brain.

All hearing aids have three basic components: a microphone, an amplifier, and a receiver (speaker). The microphone receives sound and transforms it into electrical impulses. These impulses are then processed by the amplifier and modified. The receiver then transforms the processed impulses back into audible sound. The new sound is channeled through the middle ear to the inner ear where the auditory nerve transmits it into the brain where it is decoded.

One Sound Fits All

When hearing aids were first introduced, the technology of the day simply amplified all sound picked up by the microphone. The result was that not only did quiet sounds become louder, but loud sounds became even louder, which reduced the comfort level significantly for the person wearing them.

Welcome To The Hearing Aid Renaissance

Through technical innovations, this problem has been resolved. Today's generation of hearing aids from Interton are so intelligent that they can instantly detect and dampen uncomfortably loud sounds while at the same time amplify quiet sounds. They can be programmed to amplify only the sounds you need amplified, and they are smart enough to operate as needed in different listening environments.



Digital Precision

The quality of the signal coding within the hearing aid's tiny microprocessors has vastly improved due to digital signal processing (DSP). In digital hearing instruments, the incoming sound is converted into a series of digits, ones and zeros, hence the term "digital". This conversion enables the instrument to carry out complex sound processing tasks that are not possible in conventional (analog) instruments. The core of Interton digital hearing instruments is the tiny microprocessor chip, which is capable of executing millions of calculations per second.



The chip divides incoming sounds into narrow channels, each with its own very precise adjustment capabilities. The more frequency bands, the greater the flexibility to "fine-tune" the hearing aid to your needs. The chip also contains custom programs (called algorithms) that constantly monitor the ever-changing environment. These algorithms adjust the sounds to meet your listening requirements in the environment you're in at the time (i.e. sitting in a crowded auditorium vs. riding in a car). The results are quite impressive:

- A more natural sound
- Listening comfort
- Improved speech understanding in noise
- "Tailor-made" amplification for your hearing loss
- Less annoyance from unwanted noise
- Reduced feedback
- Flexibility of new algorithms

Today, hearing aids from Interton are more capable than ever to transform listening information with greater accuracy. Innovations in manufacturing techniques have made hearing aids more affordable as well. Enhanced hearing with Interton is the comfortable, affordable solution.



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STYLE

Each person's hearing loss is as unique as his or her personality. That's why your hearing aid is manufactured and adjusted according to your personal needs.

Depending on the level of your hearing loss and your personal preferences you can choose between the styles and models illustrated. Hearing aids are manufactured in two basic styles: Behind-The-Ear (BTE) and those that are worn directly In-The-Ear (ITE).



Interton has built a strong reputation as a leading designer and manufacturer of multi-digital hybrid technology. Your hearing professional can help explain the advantages of digital technology and how it can benefit you when determining the best solution for your hearing loss. We have a variety of advanced technology to choose from:

Hearing With Finesse™

Since the introduction of improved hearing systems, many patients have had trouble transitioning from their previous hearing aids. Older hearing aids employed a method of sound reproduction called *Output Compression*. This method compresses sound after it is processed by the circuitry. The term output applies because the sound is in the last stage of processing prior to being sent out through the amplifier and into the ear. The process actually helps amplify the soft sounds and makes them louder. The point at which this process kicks in is set on the hearing aid to match the point at which the patient needs the amplification.



When a newer method was developed, known as *Wide Dynamic Range Compression (WDRC)*, it was hailed as a significant improvement for patients suffering from moderate to profound hearing losses. Wide Dynamic Range Compression is designed to distribute incoming sounds smoothly and naturally between the starting point of a listener's hearing loss and the point at which the amplified sound would cause discomfort. So, like output compression *WDRC* makes soft sounds loud but it also prevents loud sounds, like a slamming door, from becoming too loud. It is the latter part of this process that many patients experience difficulty.



When programmable, and more recently digital sound processing technologies made their debuts, *WDRC* was the principal method that went with them. While these technologies have made an important difference to millions of new hearing aid wearers, other people simply could not adapt to the new technologies. As their hearing loss changed, they either made due with older technology or walked away from a better hearing solution. Because the new method was deemed better, output compression technology found fewer and fewer prescriptions.

Finesse is the first hearing aid that recaptures the pure output compression method of sound processing. And it does so using the same digital sound processing technology found in today's best hearing aids. We've combined the best of the old with the best of the new.



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Advanced Option: Staris™

This sophisticated hearing aid represents the next level of digital technology. Staris features one to three programs that work to isolate which signals should be emphasized and which should not. The programs will be tuned by your hearing professional specifically for your hearing loss. Complete flexibility and amazing fine-tuning capability work together to create a more natural sound quality. Additionally, this advanced class offers Speech Management System (SMS), Feedback Manager, and Microphone Noise Reduction (MNR). These optional features enhance Staris' performance to reduce unwanted noise.

Superior Choice: EVO™

This hearing aid offers 14 filter bands for greater adjustability and gain separation. Using more bands within fewer channels allows for easier fittings. Multi-memory and optional directional microphone allows patients to select omni or directional in any memory. Furthermore, these aids may be programmed with adjustable SMS, MNR, and Feedback Manager providing individual fine-tuning according to your patient's hearing impairment. One of our top performing models, EVO Twin, is a fully automatic hearing aid containing three different listening programs. With the program switch you decide which listening program is right for the hearing challenge. Staris and EVO circuitry are available in BTE, Custom, (CIC to Full Shell).



Directional microphones can help reduce background noise and further enhance your ability to hear what you want to hear.

IQ—Intelligent Hearing

Today we are observing hearing losses occurring at an earlier age than in previous generations. Recent studies have shown that, on average, measurable hearing loss occurs as early as age 40. Because we depend on communication now more than ever, Interton has developed IQ.

IQ is a communication tool advanced in its capability but designed for convenience to meet the needs of today's generation.



IQ Meets Today's Challenge

Today's generation needs advanced solutions that are effective, useful, and easy to use. Today's generation also needs the assurance that they can rely on products like IQ to enhance communication. IQ meets this demanding challenge with state-of-the-art technology, convenience, and innovative features like adaptive feedback control and directional microphones. IQ is Interton's finest hearing instrument.

- **Fast microchip processor**—One of the fastest, reproduces sound in real time
- **Volume control**—For personal management of loudness
- **Low battery indicator tones**—One less thing to worry about, tells you when the battery is running low
- **14 frequency bands**—Precise frequency control to shape amplification to your individual needs
- **Beep tones**—Clear indicator for program changes
- **More**—Read on to learn about IQ's most exciting advantages

IQ Blended Sound Processing

IQ uses a unique blending of three sound processes (AGCo, AGCi, WDRC, with additional broadband AGCo – your hearing care provider can further elaborate on the meaning of these acronyms) in multiple channels to process, produce, and amplify incoming sound. Processing sound in this triple-redundant manner creates strikingly clear, and acoustically clean signal reproduction for unmatched listening ability.



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About Those Options



Adaptive Feedback Control A common occurrence in many hearing aids is the embarrassing whistle that can happen during use, commonly referred to as feedback. IQ incorporates a new and highly effective control that eliminates feedback in most listening situations. This breakthrough technology works in real time along with the other sound processing functions so you don't miss a sound. Previous technologies required the addition of a telecoil option to override feedback when the wearer used the phone. IQ's feedback control is so effective that in most cases, the additional telecoil is not necessary.

Directional Microphones When our Directional Microphones are added to the hearing equation, you dramatically increase the effectiveness of your hearing solution. Directional Mics allow you to focus on sounds coming from the front. This is especially important when you need to concentrate on someone talking to you in a noisy place such as a party or in a restaurant. No other component has demonstrated the benefit to combating noise in the background like the Directional Microphone.

Speech Management System (SMS)

This system improves speech recognition when you are in noisy environments. The system continuously monitors the situation to detect slight differences between "speech like" and "noisy" signals. When no speech-like signals are detected, amplification is reduced to enhance recognition when there are actual speech signals. This results in greater speech understanding and will increase your enjoyment in social settings.



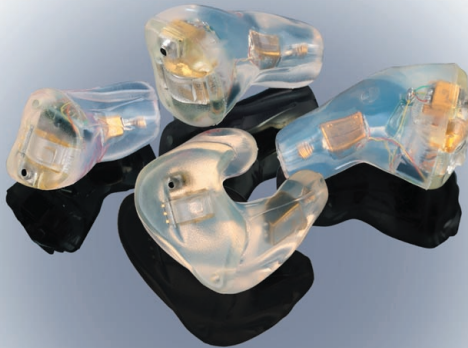
Microphone Noise Reduction (MNR) This device helps increase comfort in quiet environments by reducing microphone noise (white noise) that is characteristic in many hearing instruments.

SilFlex™—Visible Difference, Sensible Comfort

At Interton, we concluded that all the technology in the world is of no value if a person's hearing aid is too uncomfortable to wear. That's why we invested as heavily into comfort as we did technology. We pioneered new research and developed SilFlex™, a soft yet solid material. SilFlex™ is to hearing aid comfort what digital technology is to sound processing. This flexible silicone-based material is soft yet solid and completely encases vital hearing aid circuitry. This has the benefit of making advanced technology components more moisture and shock resistant. The real benefit is unprecedented comfort.

Patients tested with SilFlex™ and identical hearing aids made with acrylic shells found SilFlex™ provided a more secure fit and to be more comfortable because the flexible nature of silicone adjusts during jaw movement.

We proudly offer the Elite upgrade that includes gold plated components and our exclusive SilFlex™ soft-solid body for unparalleled comfort. SilFlex™ conforms to and flexes with small movements of the ear canal. Traditional hard shell hearing aids simply can't flex.



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YOUR HEARING LOSS: WHICH SITUATION SOUNDS FAMILIAR?

Phase One: A Misunderstanding Here, A Missed Word



There... You find it much easier to understand the person you're talking to when in a quiet environment, such as your living room or at the dinner table. But, when you find yourself in a louder setting such as a crowded shopping mall or football game, it is noticeably difficult to distinguish one voice from another. During a meeting or in a restaurant it happens once in a while that you do not understand every word.

Situations like these point to a slight restriction in the audibility of consonants. This condition should not be labeled as defective hearing at this point. However, it may be enough to make you insecure because you have some uncertainty about what was said to you.

If this scenario sounds familiar, then now is the best time to regain full control of your hearing loss. Chances are your loss is very manageable and your ability to adapt to a hearing solution is at its highest. You are an excellent candidate for an ITE style-hearing instrument from Interton. It may allow you to have relaxed conversations and easy understanding again.

The individually manufactured ITE from Interton is crafted to fit exactly to the contour of your ear and can be made small enough (depending on amplification needs) to be nearly invisible to others. With the technically perfected and fully automatic mode of operation and the help of highly intelligent technology, you are back in action. This is a piece of freedom you can hear!

Phase Two: Understanding Is More Difficult

If left unchecked, a hearing loss may progress to the point where you have to ask repeatedly to understand words during conversations. It becomes progressively more difficult to understand someone if you don't have eye contact with them when they are talking to you. As hearing loss progresses, you hardly understand anything at all. Perhaps it happens that you do not hear the phone ring or family members complain that you turn the TV or radio on too loudly.

A properly diagnosed hearing loss fit with the right hearing solution can restore the independence and communication you used to enjoy because you can actively participate in life again. Don't settle for less than complete freedom by taking advantage of the technical possibilities offered by the hearing aids of the new generation.



The digitally programmable, fully automatic aids of the “Multi-Digital” generation from Interton are designed so that you don’t miss a beat anymore. What’s more, our hearing aids are stylish and an expression of your choice not to be left behind by poor hearing. With your new “hearing helpers” you will experience daily how nice it is to hear clearly again and to understand without effort.

NATURAL HEARING PLEASURE THROUGH TWO EARS

Nature gave us two ears for a good reason: only two ears are able to determine the direction sounds are coming from.

It’s the same principle behind having two eyes so that you have the depth perception to judge what objects are near and what objects are far.

Furthermore, two ears are more capable of differentiating between speech and noise in a loud environment. If both ears are not completely functional anymore, two hearing aids, called binaural, are highly recommended. Experience from people who have both ears equipped with hearing aids show that a significantly better solution can be achieved along with greater hearing comfort for both ears.

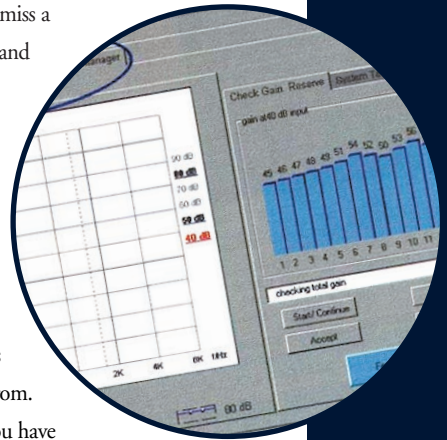
Have your hearing healthcare professional consult with you about the advantages of a binaural set of hearing aids. Acquiring help for both ears means the best possible solution for optimal understanding.

OFFERING THE RIGHT ADJUSTMENT

Accurate adjustment of your hearing aids is accomplished by our custom-designed program called CompuFit™. This software is run by your hearing healthcare provider to precisely tune your hearing aids to fit your needs. With CompuFit™, your hearing aids can be optimized quickly and effectively. Through this quick process you’ll receive personalized settings that meet your specific listening needs.

Your Bridge To Natural Hearing

Hearing is a joy again! After the first adjustment you will be able to test your hearing aids in the comfort of your home. After a few days of your new hearing experience, you will be able to determine what, if any, adjustments may be needed. During this initial acclimation period we recommend that you remain in contact with your hearing healthcare provider about your experience with your new hearing aids. Getting yourself “retrained” to hear sounds again that you haven’t heard in a while is a progressive process.



10 TIPS FOR YOU AND YOUR HEARING AID



- In the beginning, wear your new hearing aids only for a few hours at a time and in a familiar environment. This provides an opportunity for your ears to get use to the world of new sounds. The auditory center of your brain needs this time to re-learn to differentiate between usable and unusable sound. For example, you may notice the sound of the refrigerator humming and it may even seem bothersome. Be patient, you will learn again to filter out sounds like this as time goes on.
- Increase the acoustical challenges slowly. (Don't go to an opera on the second day.) Slowly increase the wearing time of your hearing aids until you can comfortably wear them all day, every day.
- It is best to have the *first* conversations with one person only. Learn to receive the voice with a normal volume again. Try to identify sounds that you don't recognize right away.
- Learn to make phone calls with the hearing aids. Hold the phone directly to the built-in microphone of your hearing aid. If you hear feedback (whistling), simply increase the distance between the phone and the hearing aid.
- As you learn to enjoy TV and radio shows again, don't expect to understand everything immediately. Even people with good hearing are not able to distinguish every sound without effort because of the frequent changes in broadcast volume.
- If you want to become part of a conversation, sit close to the person talking.
- Do not store the hearing aids in the bathroom. Dirt and moisture are not good for your sensitive equipment.
- Do not wear the hearing aids at night. If you have concerns about not hearing the alarm clock, talk to your hearing healthcare professional and he or she will gladly consult with you regarding additional equipment.
- Always have a sufficient supply of batteries on hand.
- Hearing aids are articles that are carried directly on the body and need appropriate care. Inform yourself about care products and the right storage of your hearing aids.



FREQUENTLY ASKED QUESTIONS

What Should I Do If I Think I Have A Hearing Loss?

- Only your physician or qualified hearing healthcare professional can determine whether with an examination you have a hearing loss and how severe it is.

I Have A Constant Ringing In My Ears—Can Hearing Instruments Fix It?

- Tinnitus, a constant ringing, hissing or roaring in the ears, affects countless people. There isn't a cure for it but it can be managed. Usually the cause of tinnitus is injury to the ear from loud sounds. In addition, people with tinnitus may not have a hearing loss as well. If you have tinnitus your hearing healthcare professional will discuss it with you as part of your hearing evaluation.

What Causes Hearing Loss?

- Sensorineural loss, often called “nerve loss” is usually the cause of hearing loss. Any prolonged exposure to loud noises, certain illnesses and medications, aging or heredity can be factors.

How Common Is Hearing Loss?

- More than 28 million Americans suffer from hearing impairments, but only 20% seek help for their hearing loss. For those 65 or older, one in three have some degree of hearing loss, while one in 11 Americans have some degree of hearing loss.

If I Have My Hearing Tested Will I Have To Get Hearing Instruments?

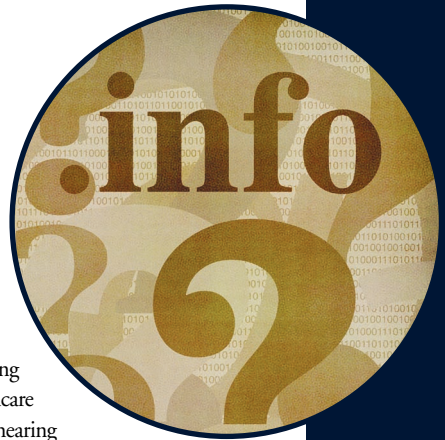
- Not always. Some hearing loss may be attributed to excessive wax build up or other factors.

What If I Need Hearing Instruments?

- Your hearing healthcare professional will determine if a hearing aid is right for you. With the advancements in technology, a hearing aid can greatly improve hearing in most situations for you. Interton offers a wide variety of hearing aids and technologies to provide you all the help possible.

How Do I Know If I Have A Hearing Loss?

- You may have a hearing loss if:
 - You hear voices when people are talking but have to strain to understand their words.
 - You may find that this problem occurs frequently or that it happens only with certain people or in certain situations.
 - You often ask people to repeat what they say.
 - You do not laugh at jokes because you miss too much of the story.
 - You frequently complain that people mumble.
 - You need to ask others about details of a meeting you just attended.
 - You play the TV or radio too loudly. (Ask your family or friends about this).
 - You can't hear the doorbell or telephone.
 - You find that looking at people when they talk to you makes what they say easier to understand.



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Patient Notes:

**This information is brought to
you in the interest of better hearing by:**



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