

# Prepare For A New Generation



Introducing 

*Intelligent Hearing From Interton*



# IQ Innovation

## Today's Patients—A New Generation.

This New Generation is more consumer oriented, more sophisticated, and more health conscious than ever. The needs of the new generation are characterized by an active and dynamic lifestyle that includes career, travel, family, and a need for technology that is as easy to use as it is advanced in its capability. You are as much a part of the new generation as the patients you will serve.

### Higher Standards

You will agree the standards of the new generation run high. We want innovation, we expect reliability, we desire to own the best, and we don't want hassles. You're being called on to meet these ever demanding needs and your success lies in your capacity to offer the products that best meet these very challenging requirements. IQ was engineered with ideas from customers like you, who want to offer products that are easy to order and quick to program; that are more reliable and less likely to be returned. IQ meets your needs with THE higher standard for the new generation.

### No Hassles—No Out-Of-Pocket Expenses For 3 Years.

You don't need the irritation of complicated order forms, to have to wait any longer than necessary for your order to come back from the manufacturer, nor do you have to accept "business as usual" from the suppliers you trusted to take care of your needs with no assurances. With the introduction of IQ from Interton we're not only offering a new kind of advanced hearing instrument, we're offering a no-hassle approach to ordering, dispensing, and servicing for you and your patient. No-hassle means a quick and easy order form, amazingly simple programming software, and an unprecedented array of extras that help your patient feel confident in their investment in better hearing. This degree of backing and servicing lowers the feeling of risk so many patients feel when contemplating their investment in hearing aids. IQ's capability and extras will be one of your best marketing tools ever. These extras include:

- Free Dry & Store global hearing aid dryer
- Free versatile hearing aid travel case
- 3-year technology guarantee
- 3-year repair and L & D warranty
- 3-year supply of batteries
- 3-year supply of CeruSTOP® wax protection replacements



### Our Pledge

**It's simple: We pledge to provide you with one of the most technically advanced hearing solutions available for your patients and a hassle-free experience for you.**

Interton employs talented people, ripe with creative, imaginative ideas, and equips them to bring those ideas to the market, ideas that came from inside the company and from you, the hearing health professional. From the lab to the dispensing office, IQ is the innovative consequence of your imagination and ours. Interton took a ground-up approach to the whole process and built a program around IQ not only as a superior hearing solution but as a no-hassle experience for you and your patients. Just look at the array of extras we've included as part of a total hearing solution package:

## For You

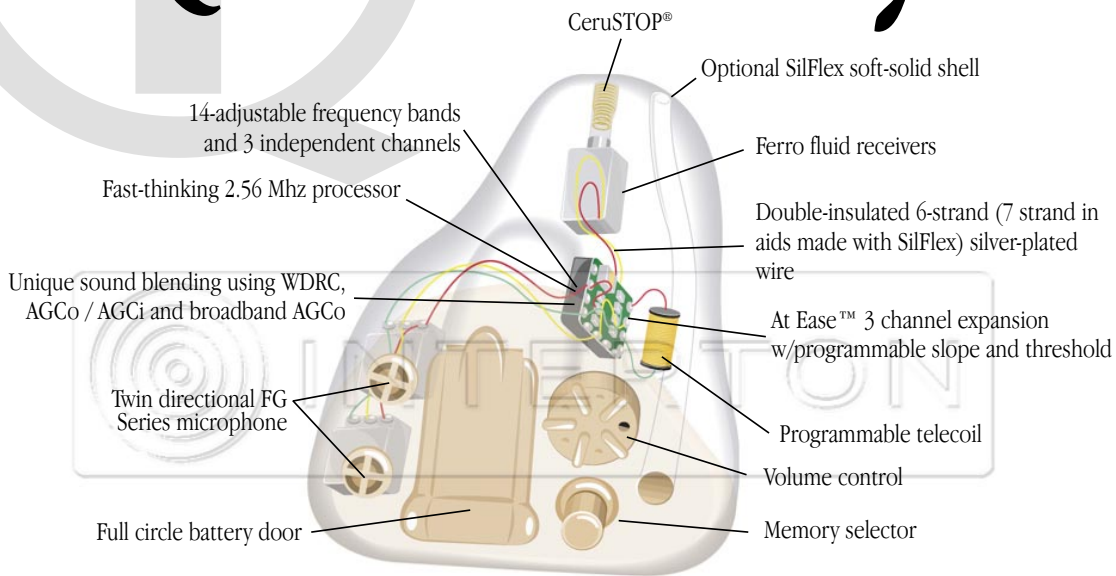
- ✓ **Simple and easy order form**—Have you ever notice the typically complex hearing aid order form? Can you tell they're designed to be more convenient for the manufacturer than they are for the customer? IQ has it's own simple order form that is quick and easy to complete.
- ✓ **Easy software**—CompuFit™ fitting software has been praised by hearing professionals around the country as one of the most easy-to-use, intuitive, and effective fitting programs developed by any manufacturer. Software tutorial walk through is available at installation and via Help menu, and printable tech data sheets for any product. CompuFit can program a product automatically or manually, depending on your personal preference.

## For Your Patients

- ✓ **3-year no-hassle warranty on repairs, remakes, and loss & damage coverage**—your patients will feel more confident in choosing IQ when they know their investment will be protected three times longer than most other hearing aids.
- ✓ **3-year supply of batteries**—The first carton of batteries is delivered with the order and vouchers for subsequent cartons that your patient can mail in are also included.
- ✓ **3-year technology guarantee**—Add the assurance that when your patient buys the best, it will stay the best. When we come out with an improved hybrid, your patient may request a free upgrade.
- ✓ **3-year supply of CeruSTOP®**—One of the best wax protection systems available. You give your patients greater ability to protect their hearing aids and keep them working longer.
- ✓ **Useful travel case**—A better way to transport hearing aids; durable, with extra convenience compartments for batteries, accessories, and for whatever else your patient wants to use it for.
- ✓ **DigiShell™ is standard**—No guess work, no hassles; DigiShells are computer generated and laser accurate. DigiShells are fabricated with a superior shell material that offers an exacting replication of your impressions with notable improvement in comfort.
- ✓ **Dry & Store Global hearing aid dryer**—You won't have to send your patients out the door and wait for them to return with moisture-related problems. When they walk away with their free hearing aid dryer, you arm them with more capability to prolong the reliability and life of their hearing aid. You'll also send them home with the knowledge that you care enough to help them protect their investment in better hearing.



# IQ Reliability



## IQ Reliability

Innovation and technology do little for you when they don't work. We listened to hearing healthcare providers and understand that once your patient is fit, unless their hearing needs change, you want them to have a long and successful experience with their hearing aids. The chance of an unsatisfied patient and a credit return increases with each visit. We've tackled the issue of reliability by assembling every available quality design feature.

## Quality Isn't Just In The Parts...

The Focused Factory concept we employ at Interton is not just a marketing idea, it's a real production method, built around specific groups of customers, that dictates everything from where people sit, to who builds which hearing aid, and how the manufacturing floor is laid out. In most manufacturing environments the opportunity to take pride in the work is never presented because the assembly person is only responsible for a small portion of the finished product. At Interton we employ a total-quality system in our Focused Factory where the technicians can take pride in the work because they build the order from start to finish, not just a small piece of it.





# What's Inside IQ?

- **14-adjustable frequency bands** offer the utmost adaptability in shaping the frequency response to a variety of individual hearing losses.
  - **A powerful new 16-bit processor** offering higher resolution—up to 30 bit improves the dynamic range over other processors offering lesser resolutions.
  - **Directional Microphone** - our dual programmable system gives your patients more focused hearing power. The twin mic array incorporates the latest microphone technology and is balanced within 1dB of maximum efficiency.
  - **Fast-thinking 2.56 Mhz processing speed** balances power efficiency with a group delay of less than five milliseconds (longer delays can cause a distortion known as spectral smearing).
- **IQ uses a unique blending of WDRC and Output Compression** in 3-independent channels that synergize AGCo and WDRC channels with additional broadband AGCo. Through this processing, IQ works to provide audibility and comfort with minimal distortion in each channel.
- **Broad range 16 Khz** sampling frequency eliminates aliasing, which is a distortion unique to digital processing.

It's not enough to champion the benefits of a hearing solution to your patients, as consumers, in addition to all that comes with IQ your patients will appreciate the abundance of technical convenience features packed into IQ, making this the most premium hearing solution ever offered by Interton.

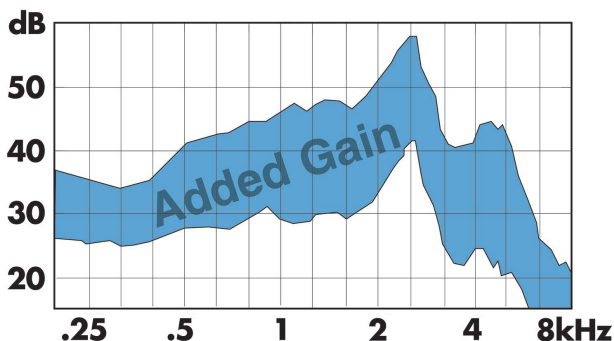
- **Programmable Volume Control**—Rotary volume control can be programmed by the dispenser for different ranges or deactivated to meet any consumer need now and in the future.
- **Programmable T-coil**— assign the T-coil to a memory and program it independently or mix it with the microphone to create a memory with both mic and T-coil active. The ratio of gain between mic and T-coil can be programmed if one of the other needs to be stronger or to balance them.
- **Push button on CIC's**—a convenience feature not found on many other brands. CIC's can also be made to use a wand as well.
- **Wind Noise and Occlusion Solutions** / The “Doctor” is in! Meet the amazing “Dr. Fit” fitting assistant—as part of the fitting software Dr. Fit has over 50 of the most common fitting problems and corresponding solutions, just click on the problem/solution item and Dr. Fit will program the solution on the spot. Dr. Fit is also linked to IQ's Occlusion and Wind Noise Solutions.
- **DAI** on our BTE's are MicroLink™ and Lexis™ compatible.
- **Audible low battery indicator tones.**
- **Adjustable beep tones** program the volume level and/or the frequency of the indicator tones.



# IQ Solutions

## Adaptive Feedback Manager

Adaptive feedback manager detects and removes unstable oscillation before it becomes audible feedback. IQ's real-time adaptive feedback manager radically increases the amount of useable gain for your patient while maintaining speech clarity and other incoming sounds. The figure to the right shows up to 17dB of additional gain is available with our adaptive feedback manager engaged. The feedback control strength is programmable in each of the three memories independently for maximum comfort and performance. Your patients will no longer be embarrassed by the annoying screech that results from acoustic feedback. In most situations, IQ even allows phone use without the added burden of switching to a T-coil. IQ is setting a new standard in feedback control as well as patient comfort and convenience.



## At Ease 3 Channel Expansion and Microphone Noise Reducer.

Patients with good low-frequency hearing may be able to detect the low-level noise generated by most hearing aids. This noise, typically described as “circuit noise”, is actually generated by the microphone and can be very bothersome in many everyday situations.

At Ease 3 Channel Expansion and Microphone Noise Reducer minimizes the audibility of microphone noise in very quiet environments. At Ease works by rapidly reducing gain when ambient noise levels fall below a pre-set level, using around 40 dB SPL. Above this level, IQ provides the necessary gain to the wearer. Below this level, gain is quickly reduced for “at ease” listening.

At Ease controls the level at which expansion is triggered (the expansion threshold) and the rate at which gain is reduced (expansion slope or ratio). Lowering the expansion threshold (see figure 1) means that expansion will not occur until the ambient noise level falls to a softer level; At Ease will not engage until the environment is even more quiet than when the expansion threshold was higher. In the illustration, three expansion thresholds are compared with linear amplification. In all three cases, output level drops rapidly for input levels that fall below the expansion threshold. In all cases, the expansion ratio is the same (all three expansion curves have the same slope).

To further illustrate, in figure 2. the expansion threshold is fixed at 40 dB and three different expansion ratios are represented. For reference, a linear slope (no expansion) is also represented. With an expansion ratio of 0.5, output rapidly drops as the input level falls below 40 dB. This situation would be too abrupt for most individuals. At an expansion slope of 0.67, the transition is more gradual, less abrupt, and would likely be less noticeable to the user. An expansion slope of 0.8 is even more gradual and more subtle. In all cases gain is rapidly reduced when the ambient noise level falls below 40 dB.

For your patients who find expansion noticeable or in some way unpleasant, At Ease can be easily set to either lower the expansion threshold so that it occurs less often and simultaneously raise the expansion slope to a value closer to 1, which reduces the rate of gain reduction as input levels vary with the expansion range. At Ease from Interton is one of the many innovations your patients will find valuable. Without it, the more likely microphone noise will be audible to them.

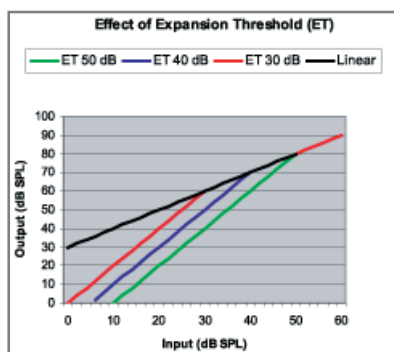


figure 1

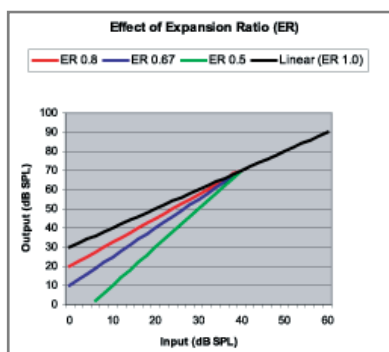


figure 2

# Anyone Can Make A Hearing Aid...But Developing A Real Hearing Solution Takes A Higher IQ.

To achieve successful patient fittings a hearing aid has to meet three criteria:

1. It must meet your patient's expectations
2. It must be as reliable as possible
3. It must be comfortable

## Interton Products—Built to Last.

At Interton we constantly evaluate technologies that are new and better and may be integrated into our product line. We purchase only the highest quality components from our suppliers and perform repetitive quality checks to ensure reliability. You can be assured that, in conjunction with hybrid chips of our own design and easy-to-use fitting software, you will prescribe the most dependable hearing products on the market today.

## Wired For Rugged Reliability.

Products made with our SilFlex use a special seven-strand stainless steel litz wire to prevent breakage when the aid is flexed. This wire comes from the implantable medical device industry and is about as fine as a human hair.

Our hard shell products are also built with a newly developed litz wire as well. The old problem wires would fray and corrode causing dead and intermittency over time. Teflon-coated wire that other manufacturers use is good but found to be too rigid for our standards. This resulted in frequent breaking and caused internal feedback when connected to the mic and receiver.

Our solution is to use a new double-coated, six-strand litz wire. The first protective coating of polyurethane enamel provides insulation of the core. The second layer is made of Nylon adding both corrosion protection and flexibility. Each strand is composed of silver-plated copper wire that makes it possible to solder at low temperature, thus protecting sensitive components from excessive heat.

## Fluid Power.

Interton incorporates the latest developments in receivers in our products. Behind wax, the leading cause of hearing aid failure was impact damage to the receiver, which can occur from as short a drop as two feet. Impact damage is also cumulative. So every time a hearing aid is dropped, it comes closer toward inevitable failure. Interton uses new Ferro Fluid receivers in all our digital products. By replacing the traditional screen damper with internal Ferro-Fluid damping, the prospect of damage through impact is virtually eliminated.

## Solid Yet Gentle.

SilFlex soft-solid shell technology effectively addresses many of the problems associated with old uncomfortable hard shell products. The dynamic properties of SilFlex shells gently flex inside the ear canal during jaw movement, making product rejection due to comfort issues a thing of the past.

Interton increases the likelihood of long-term fitting success, which is good for you, your patients, and your business.



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