

As the world's leading custom hearing instrument manufacturer, Starkey Laboratories offers a comprehensive family of digital hearing solutions in a wide variety of features and styles.



Even with all its sophistication, digital technology can't know the words you

need to hear or magically eliminate the noise you don't want to hear.

That magic only occurs in your brain. With the right kind of input from both ears, it selects and "concentrates" on the desired sounds – million times more powerfully than any man-made processor.

When a hearing loss alters that input, digital technology can help improve understanding by selectively controlling certain characteristics of the signal.

The rest is up to you.

Your willingness to relearn the necessary listening skills as you adapt to a world of amplified sound is the single most important factor in your success.



your authorized hearing professional:



A better way to hear.



What **DIGITAL** hearing instruments can do for you.



Unlike other entry-level digital systems, Cierra offers Starkey's automatic Precision Directional Imaging (PDI), which continuously monitors your sound environment. When noise levels reach a consistently higher volume, PDI automatically and smoothly narrows Cierra's sound reception pattern to focus on the area in front of you, where most conversations take place.



Mesa features Precision Frequency Resolution (PFR), which provides extremely flexible programmability, combined with the superior sound quality of digital signal processing. Mesa includes advanced features that not only enhance performance, but also provide ease and comfort for the user, including those with unique hearing challenges who encounter a variety of sound environments.



Axent is our premier digital technology, with an exclusive set of features unlike any other instruments. Available in all sizes, Axent's Wide Dynamic Range, Noise Management, Feedback Cancellation, and Dynamic Directional capabilities make it an ideal solution for the most demanding hearing needs and environments.

visit www.starkey.com for complete hearing information.



How digital hearing technology can improve life's important sounds and conversations.

Digital technology's superiority over traditional analog hearing aids isn't just what it can do with sounds, but how much better it does it.

By converting the incoming signals into computerized "bits," they can be processed, or manipulated extremely fast and efficiently in many complex ways using mathematical formulas known as algorithms. This gives digital signal processors (DSP) tremendous speed and agility to recognize a sound's key ingredients.



Like a graphic equalizer in high-end audio systems, algorithms can continually divide sounds into frequency channels. These help preserve and emphasize the higher frequencies

containing vital consonant sounds in speech – the "c" and "t" sounds in "cat" – over the



distracting rumble of low-frequency noise.

Algorithms also manage noise by its duration. While speech sounds' intensity can change radi-

cally in a millisecond, noise is more acoustically stable over a comparatively longer time. Using time, DSP precisely reduces the levels of continuous sounds like traffic noise and household appliances. And it instantaneously readjusts when changes occur, restoring amplification when sounds of shorter duration are detected.

That same sensitivity



is also useful in quiet surroundings. Utilizing an audio technique called expansion, the digital algorithm senses the consistency of softer environmental sounds from ventilation systems and appliances.

It automatically reduces amplification in the appropriate frequency range, immediately restoring proper levels when the sound pattern changes.



Digital algorithms can also minimize and eliminate the onset of feedback, a common nemesis to hearing instrument use. Within its elaborate frequency channel network, the algorithm detects the elements of feedback before they become audible. It then reduces

levels in just those discrete channels, with no noticeable effect on perceived volume levels.

The precision and flexibility of digital technology also gives us the ability to more accurately tailor your amplification for the best possible match to your listening and lifestyle needs. This process may include subsequent visits for us to ensure that you are receiving maximum benefit from your instruments.

In order to determine if the many advantages of digital hearing technology might benefit you, complete testing and evaluation are necessary. If appropriate, we'll recommend the size and type that is best suited to your requirements.



INCOMING SPEECH AND NOISE SOUNDS



Analog sound waves containing a mismatch of desirable and unwanted sounds

DIGITAL CONVERSION



Sound is broken into binary "bits" – "1s" and "0s" – for faster, more complex processing

SIGNAL PROCESSING & AMPLIFICATION



Unique algorithms manipulate certain characteristics to achieve a better balance of sound.

We look forward to answering your questions about this amazing technology.