

# ALTAIR

PROFESSIONAL INFORMATION GUIDE

THE LEADING VALUE IN ADVANCED DIGITAL HEARING AIDS



 **SONIC**  
innovations

## **ALTAIR®**

### **CLINICALLY PROVEN TO ENHANCE SPEECH INTELLIGIBILITY IN NOISE.**

#### **MORE ADVANCED FEATURES THAN COMPETITIVELY PRICED DIGITAL HEARING AIDS:**

- Nine programmable channels for more natural sound
- Nine programming handles for prescriptive accuracy
- Real-time processing for more lifelike communication
- Speech Weighted Expansion™ technology to reduce low-intensity sounds
- Directional technology (available on select models)
- Automatic tones for program change and low battery alert
- A highly sophisticated digital microchip
- Seven models to assure maximum comfort

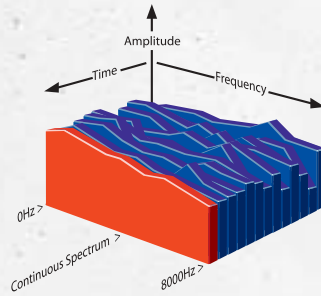
#### **A BETTER SOUND SYSTEM, A BETTER VALUE.**

The number one complaint among hearing aid users is the inability to hear conversations in the presence of background noise. That's why SONIC innovations created a family of digital hearing aids clinically proven to help solve this problem. ALTAIR's high-performance digital signal processing, along with many of our advanced features, helps provide the comfortable listening experience your patients have been waiting for—and the enhanced speech understanding in noise that they deserve.

#### **NINE INDEPENDENT CHANNELS.**

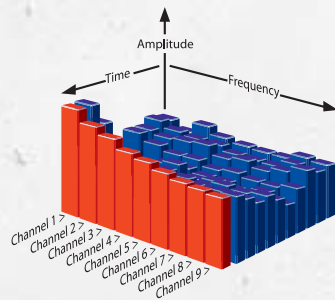
Like the human cochlea, ALTAIR processes frequencies within narrow bands. Specifically, our microchip contains nine independent compression channels that can be programmed to within 1 dB accuracy. This allows ALTAIR to be personalized for specific individual hearing loss with prescriptive accuracy using our EXPRESSfit™ software. The significance of nine independent compression channels is more apparent when you compare natural sound (figure 1) with how ALTAIR processes sound (figure 2). Other digital hearing aids, like a popular 3-channel (figure 3), deliver a less natural sound because they process sound through fewer channels.

## HOW ALTAIR PROCESSES SOUND.



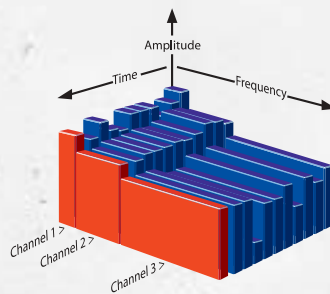
**FIGURE 1.**

*Shows natural sound recording of a symphony represented by a smoothly flowing curve (amplitude across frequency)*



**FIGURE 2.**

*ALTAIR uses 9 channels to process sound in smaller units that better represent the original sound*



**FIGURE 3.**

*A digital instrument uses only 3 channels to process sound in larger units, that provides a poorer representation of the original sound*

### **FAST-ACTING, NARROW BAND COMPRESSION.**

ALTAIR responds to speech cues and other sounds in real time. Many of today's other digital hearing aids use wide-band compression, where complex sounds of the real world are processed in a highly simplified manner. This results in less accurate reproduction of the original sounds to the wearer. ALTAIR has the only microchip sophisticated enough to provide virtually simultaneous attack and release times operating in narrow bands. ALTAIR's nine-channel, narrow-band, fast-acting compression can process these complex sounds separately and distinctly.

### **SPEECH WEIGHTED EXPANSION.**

To address a common complaint that hearing aids are noisy in relatively quiet environments, ALTAIR adapted "expansion" technology from the professional audio field. Traditional hearing aids with Wide Dynamic Range Compression apply the highest level of gain to the softest sounds, including non-speech sounds. As a result, soft sounds get too loud and become annoying. ALTAIR's Speech Weighted Expansion technology actually reduces the volume for low-intensity sounds, so it is quieter, without compromising volume for normal-intensity sounds. Speech Weighted Expansion can be set to meet each individual's needs. To understand the benefits of expansion, see figures 4, 5 and 6.

### **HOW EXPANSION TECHNOLOGY WORKS.**

**FIGURE 4.**

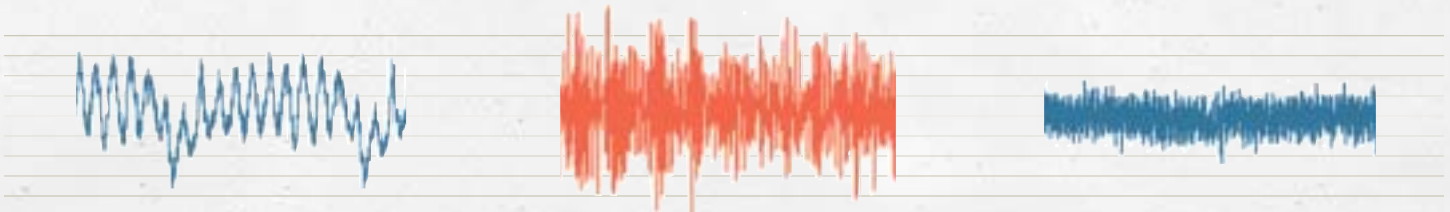
*The natural sound of a ventilation fan in a room*

**FIGURE 5.**

*A typical digital hearing aid without expansion amplifies the fan noise*

**FIGURE 6.**

*ALTAIR's use of expansion reduces the loudness of the fan*



### **DIRECTIONAL TECHNOLOGY.**

ALTAIR employs our switchable directional microphone technology. This enables us to offer an improved hearing-in-noise experience by de-emphasizing noise behind the hearing aid and allowing patients to focus on sounds coming from in front of the hearing aid. Directional technology is available on select models.

### **AUTOMATIC PROGRAM ALERT TONES.**

ALTAIR uses subtle tones to tell users when they have changed from one program to another. In addition, a distinct tone will alert users when the battery is low. The volume of these tones is adjustable, and can be set to the appropriate level for each individual.

### **SPACE AND ENERGY SAVINGS.**

Our second-generation microchip offers advanced Digital Sound Processing, using a tiny single chip solution. This microchip fits easily into the smallest of hearing aids, including the discreet CIC model. Because it uses less battery power than many traditional hearing aids, your patients save the money and inconvenience of frequent battery replacement.

### **KEEP THE DIALOGUE GOING.**

SONIC innovations is a technological leader in the hearing health industry. We are committed to continually research and create products that provide the most natural sound quality and lifelike communication experience for your patients.

Please contact us with any questions or suggestions about how to improve our products to help your patients.



## SEVEN MODELS.

ALTAIR is available in seven models to fit your patients' wants and needs.

Completely-in-the-Canal (CIC) .....



Mini-Canal (MC) .....



In-the-Canal (ITC & ITC-P) .....



Half Shell (HS) .....



In-the-Ear (ITE) .....



Behind-the-Ear (BTE) .....





In a multi-site clinical study most users of ALTAIR showed improved speech understanding in noise. There is only one way to determine individual benefit—try ALTAIR hearing aids and let your patients hear for themselves what ALTAIR can do for them.



[www.sonici.com](http://www.sonici.com)