

## A New Dimension in Hearing

Education & Training

Hear better. Live better.



@StarkeyHearing



## Can you hear me?

If you are having technical problems, please stay logged on and call Audiology Online at 1-800-753-2160



This session  
is available  
for 1/.1  
CEU.

Must stay  
logged on for  
the full  
session.

Must  
successfully  
complete a  
short quiz.

## Learning Objectives

After this course, participants will:

- Know what products utilize Acuity Immersion
- Know what products utilize Immersion Directionality
- Know what configurations are available for the TruLink Remote Control



patients said having  
hearing aids improves  
their quality of life.

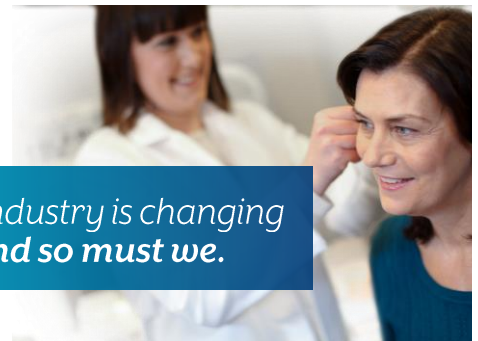


patients said having hearing aids  
makes them feel more confident  
in social situations.

Insights from  
WebMD

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Study sponsored by Starkey Hearing Technologies.

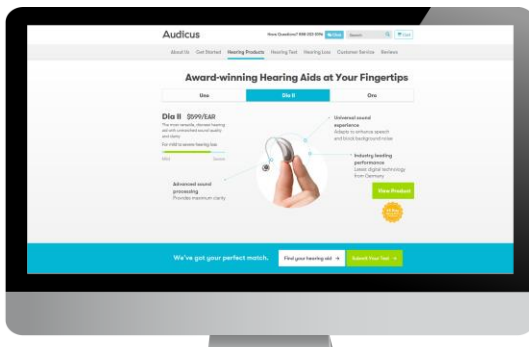
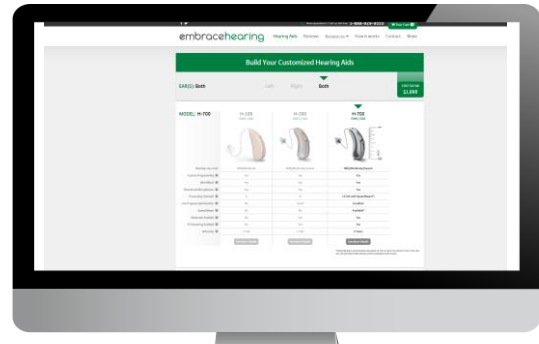
Our Industry is changing  
and so must we.





Executive Office of the President  
The President's Council of Advisors on  
Science and Technology

Leading barriers to  
hearing healthcare are  
“**availability and  
affordability**”

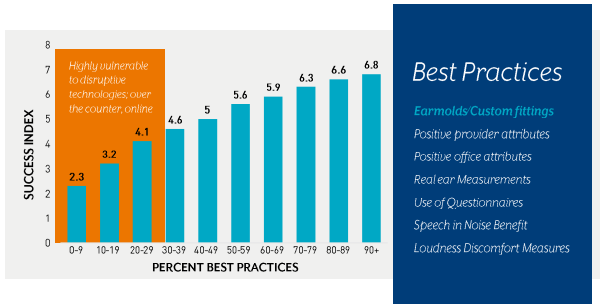


### Top 10 Reasons For Hearing Aid Delight

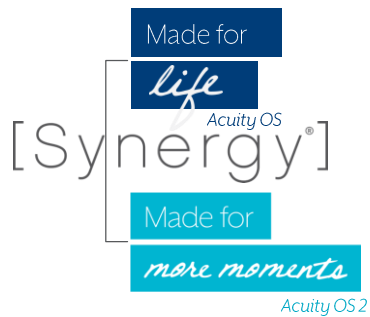


1. You, the hearing care professional
2. Continued connection
3. Verification and Validation
4. Experimentation
5. Strong recommendation
6. Counseling
7. Evaluation
8. Professionalism
9. Motivation
10. Hearing aids actually work





Kochkin et al. (2010)



## Introducing iQ<sub>2</sub>

Hearing you can feel



A new dimension  
in hearing



Acuity  
OS 2

iQ  
Enhancements

Patient Delight  
Features

iQ Products &  
Accessories

## Acuity OS 2



A new dimension  
in hearing



Acuity  
OS 2

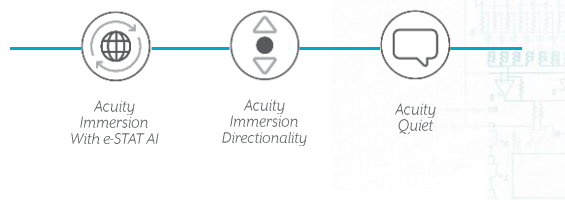
iQ  
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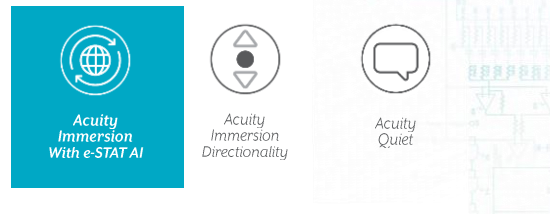
## Introducing iQ<sub>2</sub>

Hearing you can feel



## Introducing iQ<sub>2</sub>

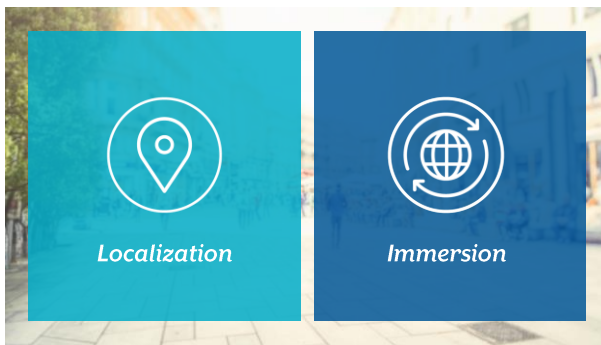
Hearing you can feel





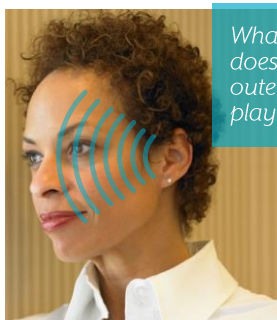
**Spatial hearing** is the brain's early warning system, simultaneously sensing all the space around us and provides the feeling of connectedness with the world – the sense of presence.

Simon Carlile, Ph.D.  
Vice President of Research  
Starkey Hearing Technologies



## Binaural Cues

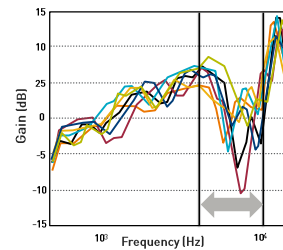
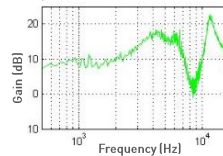
Interaural *Time* Difference (ITD)  
Interaural *Level* Difference (ILD)



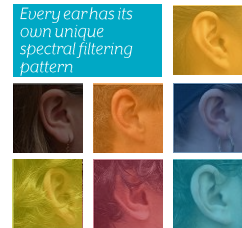
What role does the outer ear play?

### Head Related Transfer Function

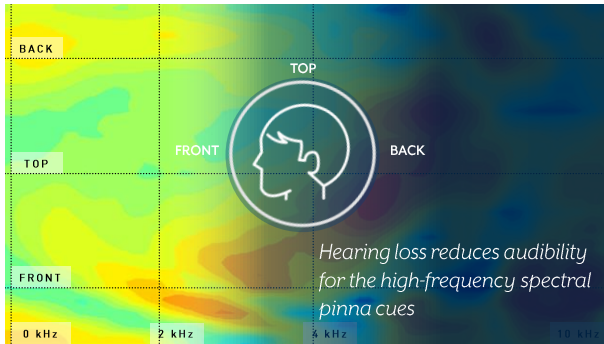
Our outer ear, specifically our pinna and concha, filters the sound as it enters the ear.



Every ear has its own unique spectral filtering pattern



Carlile, S. (2014) Frontiers in Neuroscience



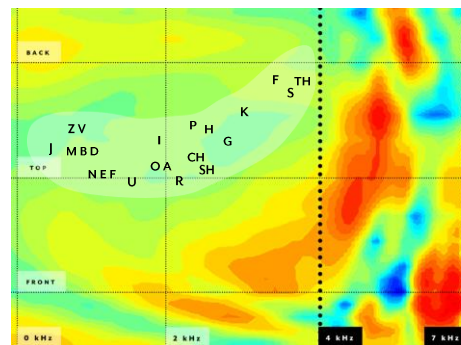
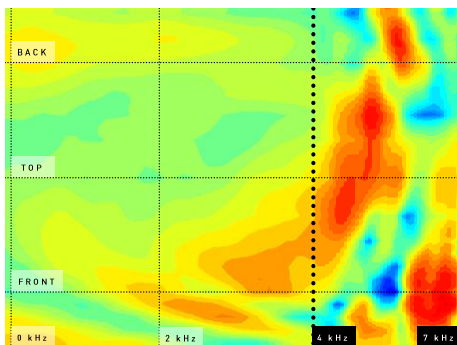
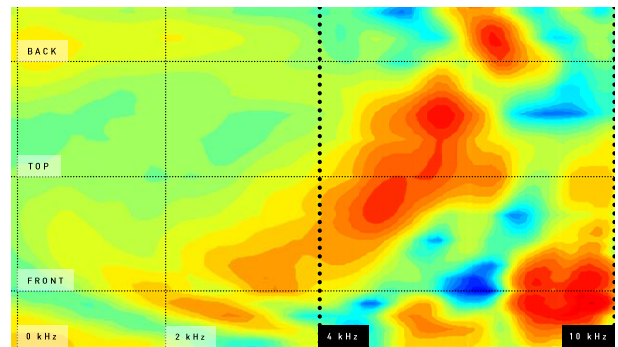
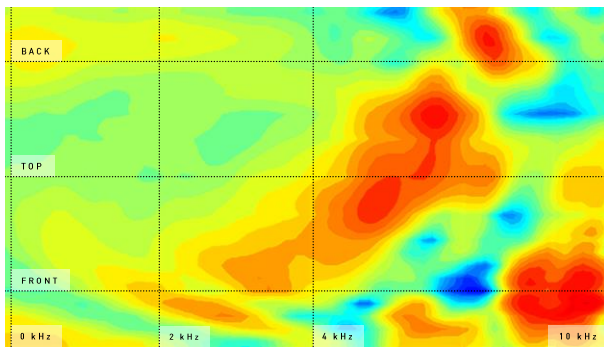
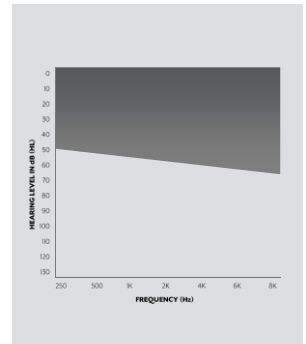
## Acuity Immersion for Spatial Awareness



**CIC**  
Completely-In-Canal  
**MuseIQ CIC**



**IIC**  
Invisible-In-Canal  
**SoundLensSynergy IQ**





## Perceptual Relearning

Over time the brain is able to use these newly perceptible spectral cues to **relearn spatial relationships** and restore the natural sense of presence



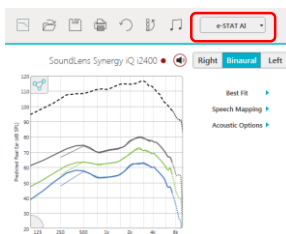
Carlile, S. (2014) Frontiers in Neuroscience

## Acuity Immersion in Inspire

|                        | Normal | Close | Music | Disabled | Stream Sound Off | Far to far |
|------------------------|--------|-------|-------|----------|------------------|------------|
| Speech and Patter      | 3      | 3     | OFF   | ---      | ---              | ---        |
| Quiet                  | 3      | 3     | 3     | ---      | ---              | ---        |
| Wind                   | 2      | 3     | OFF   | ---      | ---              | ---        |
| Machine Noise          | 3      | 3     | OFF   | ---      | ---              | ---        |
| Auto Music             | 3      | OFF   | N/A   | ---      | ---              | ---        |
| <b>Spatial Hearing</b> | ON     | ON    | N/A   | ---      | ---              | ---        |



## Acuity Immersion in Inspire



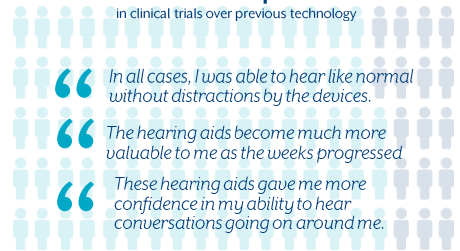
*e-STAT AI* is the required fitting formula for the Acuity Immersion feature.

*e-STAT AI* is a **UNIQUE**, proprietary fitting formula developed by Starkey Hearing Technologies to achieve optimal audibility of the spatial frequency cues.



## ACUITY IMMERSION preferred 4 to 1

in clinical trials over previous technology



ACUITY IMMERSION (83%)

E-STAT (17%)

## Introducing iQ<sub>2</sub>

Hearing you can feel



Acuity Immersion With e-STAT AI



Acuity Immersion Directionality



Acuity Quiet



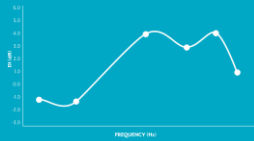
## Acuity Immersion Directionality

Restores the benefits of **natural directivity** by recreating elements of sound filtering naturally performed by the pinna



### Natural Directivity

The pinna and concha provide up to 3-4 dB SNR improvement in the high frequencies



Speech  
70 dB SPL

Noise  
70 dB SPL



Natural Hearing audio file

### Standard Hearing Aids

Reduces and even impairs the natural ear directivity



Speech  
70 dB SPL

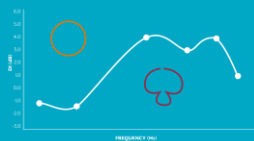
Noise  
70 dB SPL



Omni: no pinna cues audio file

### Acuity Immersion Directionality

Restores natural directivity in the high frequencies, improving performance in noise and localization



Speech  
70 dB SPL

Noise  
70 dB SPL



Immersion Directionality audio file

### Introducing iQ<sub>Q</sub> Hearing you can feel



Acuity  
Immersion  
With e-STAT AI

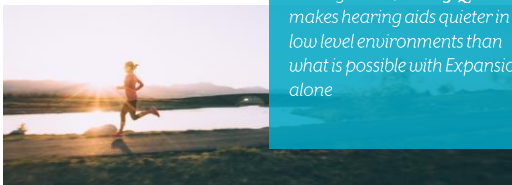


Acuity  
Immersion  
Directionality

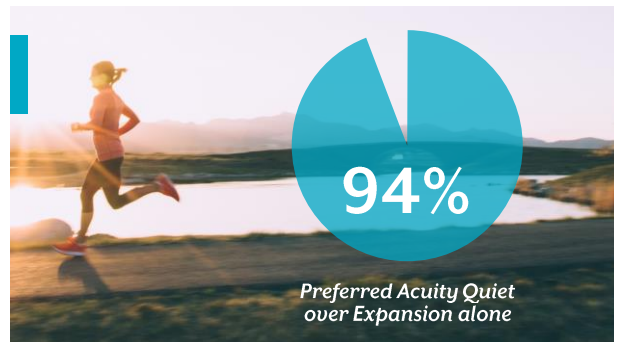


Acuity  
Quiet

### Acuity Quiet



Enhancing Expansion with our patented fast-acting noise management, **Acuity Quiet** makes hearing aids quieter in low level environments than what is possible with Expansion alone







Acuity  
OS2

iQ  
Enhancements


Patient Delight  
Features

iQ Products &  
Accessories



Made for reliable,  
everyday use



- > Speech Indicators for Memory**  
Gives situational, rather than numeric memory indicators for a long list of patient activities (restaurant, home, etc.)
- > Smart VC**  
Offers increased dB in available channels even if a channel hits it's max, allowing users to receive expected volume gains (Muse iQ and SoundLens Synergy iQ only)
- > WhistleFree Feedback**  
The only proactive feedback management system that anticipates feedback and can be personalized to protect the patient
- > Speech Shift**  
Enhances real time audibility by identifying high-frequency speech cues and replacing them in lower frequencies
- > MultiFlex Tinnitus Technology**  
Patient-pending tinnitus solution is designed with personalization and flexibility in mind and is standard on all styles
- > Surface Nanoshield**  
Coated on components, cases and HearClear wax traps. 



Acuity  
OS2

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Accessories





Accessories for  
*every patient  
and lifestyle*



## Accessories

For every patient and lifestyle

### TRULINK REMOTE

Patients now have options for effortlessly controlling their Halo iQ devices

- Advanced configuration
- Basic Configuration



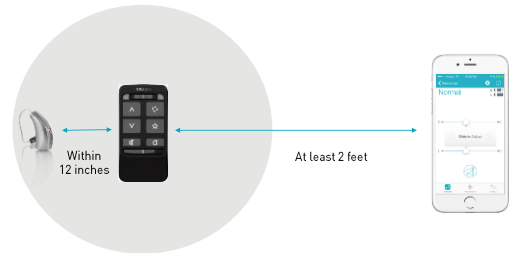
## WHEN TO CONSIDER TRULINK Remote Control

- “ I'd like to have easy control of my hearing aids
- “ I need to make discreet adjustments
- “ I don't have a fancy smart phone...
- “ I don't see my smart phone on the compatible list...





## Pairing TruLink Remote to Halo iQ



## Bluetooth Pairing Process

1. Move lower switch from Lock (right) to Unlock (left) position
2. Insert battery, close hearing aid(s) battery door
3. Place hearing aid (s) within 12 " of the TruLink Remote Control
4. Press and hold the HOME button for 5 seconds
5. Allow 5 seconds, both LED's will start rapidly blinking



|             | RIC, BTE, & CUSTOM | IIC                     | RIC     |
|-------------|--------------------|-------------------------|---------|
| PRODUCT     | Muse iQ            | SoundLens iQ<br>Eyewear | Halo iQ |
| STYLE       |                    |                         |         |
| ACCESSORIES |                    |                         |         |

**InspireX**

iQ Products and Features  
 TruLink Remote Accessory  
 Speech Indicators  
 Smart Volume Control  
 New Patient Reports  
 Expanded In Situ Audiometry

## iQ Proven Performance

"These hearing aids gave me more confidence in my ability to understand conversation going on around me."

"They were easy to use and hear surrounding speech. I found most of the sounds I heard to be what I expected them to sound like."

"Life was just easier"

"In all cases I was able to hear like normal without distractions by the devices. The best aids and accessories that I have ever used"



