

## References

1. Rebscher SJ, Hetherington A, Bonham B, Wardrop P, Whinney D, Leake PA. Considerations for design of future cochlear implant electrode arrays: Electrode array stiffness, size, and depth of insertion. *JRRD*. 2008 45(5):731-748
2. Rivas A, Isaacson B, Kim A, Driscoll C, Cullen R, Rebscher S. (2017) New Lateral Wall Electrode, Evaluation of Surgical Handling, Radiological Placement, and Histological Appraisal of Insertion Trauma, San Francisco, July 26 -29, 2017.
3. Hasseplass F, Bulla S, Maier W, Laszig R, Arndt S, Beck R, Traser L, Aschendorff A; The New Mid-Scala Electrode Array: A Radiologic And Histologic Study In Human Temporal Bones. *Otology & Neurotology* 2014; 35(8):1415-20
4. Dietz A, Iso-Mustajärvi M, Sipari S, Tervaniemi J, Gazibegovic D; Evaluation of a new slim lateral wall electrode for cochlear implantation: an imaging study in human temporal bones. *Eur Arch Otorhinolaryngol*. 2018 Jul;275(7):1723-1729
5. Stakhovskaya O, Sridhar D, Bonham BH, Leake P. Frequency map for the human cochlear spiral ganglion: implications for cochlear implants. *J Assoc Res Otolaryngol*. 2007 Jun; 8(2):220-33. PMID: 17318276.
6. Avci Ersin, Nauwelaers Tim, Lenarz Thomas, Hamacher Volkmar, Kral Andrej, Variations in microanatomy of the human cochlea, *The Journal of Comparative Neurology* 2014 Oct 1; 522(14): 3245 -3261.
- 7: EN 45502-2-3:2010. Active Implantable Medical Devices. Particular Requirements for Cochlear and Auditory Brainstem Implant Systems.



### Advanced Bionics AG

Laubisrütistrasse 28,  
8712 Stäfa, Switzerland  
T: +41.58.928.78.00  
F: +41.58.928.78.90  
[info.switzerland@AdvancedBionics.com](mailto:info.switzerland@AdvancedBionics.com)

### Advanced Bionics LLC

28515 Westinghouse Place  
Valencia, CA 91355, United States  
T: +1.877.829.0026  
T: +1.661.362.1400  
F: +1.661.362.1500  
[info.us@AdvancedBionics.com](mailto:info.us@AdvancedBionics.com)

For information on additional AB locations, please visit  
[AdvancedBionics.com/contact](http://AdvancedBionics.com/contact)

AB – A Sonova brand

For more information,  
visit [AdvancedBionics.com](http://AdvancedBionics.com).

028-M949-02

©2018 Advanced Bionics AG and affiliates. All rights reserved.



Advanced Bionics

# HiRes Ultra 3D Cochlear Implant — For a Life Without Limits



A Sonova brand





## The Latest Technology for Full Living and Hassle Free MRIs

Getting a CI is a life-changing decision. That's why we at Advanced Bionics design implants for life—and all the activities, situations and environments it presents.

Whether it's listening to a live performance, talking to a friend or relative on the phone, participating in a meeting, playing sports or simply enjoying the sounds of the world around you, our HiRes™ Ultra 3D cochlear implant system was designed to deliver the most accurate and complete sound possible, so you never miss a thing in any setting.

And with the first-of-its-kind magnet that provides 3D magnetic field alignment, our latest implant is also safe for a 3.0 Tesla MRI without magnet removal—giving you the freedom of hassle free MRIs if you ever need one.

We are passionate about delivering you the most-advanced technology to allow you to hear and live your best. And with over 70 years of experience developing and delivering innovative hearing products, we're dedicated to pushing the limits of technology to provide the most natural and complete hearing solutions possible—so you can have a life without limitations.

All around the world, hundreds of thousands of people have already benefitted from our cochlear implants. We look forward to being part of your hearing journey too!



## Sophistication in Design: Meet the World's Most Advanced Cochlear Implant System

### Future-Proof

Our HiRes Ultra 3D implant is designed to accommodate signal processing improvements and easy compatibility with all future product enhancements.

### Gentle on the Inner Ear

Our implant's tiny electrode array is what stimulates your hearing nerve. Our electrodes are designed to protect the delicate cochlea structures<sup>1-4</sup> and provide complete coverage of the cochlea for full-spectrum sound.<sup>5,6</sup>



### Hassle Free MRI

Our HiRes Ultra 3D cochlear implant, with its magnet that provides 3D magnetic field alignment, has no restriction on head orientation during the MRI. It further eliminates the lengthy preparation procedures for you, such as surgically removing the magnet.

### Thin, Strong and Versatile

The HiRes Ultra 3D is designed to exceed industry standards for all-day use and impact resistance so you can enjoy all of life's adventures without limits.







### Clear, Effortless Hearing in Every Setting

Every aspect of our HiRes Ultra 3D CI system has been optimized for clarity, comfort and convenience and to work seamlessly together toward one unwavering goal: helping you hear your best. Thanks to our sophisticated electrode design and our partnership with Phonak, the world leader in hearing aid sound digitization, our sound processor can deliver frequency information to 120 cochlear places. This gives you a fuller and richer hearing experience. And no matter what environment you are in, our system automatically filters out background noise and adjusts to deliver optimal hearing.

### Simple Way to Hear More

We've got two ears for a reason. Using both ears gives you a more balanced and accurate directional representation of sounds. Advanced Bionics provides you with a complete, bilateral and bimodal cochlear implant hearing solution tailored to your individual needs.



### Hassle Free MRIs

We believe that an MRI procedure should be hassle free for you. That is why the new magnet in the HiRes Ultra 3D CI, invented by AB, provides 3D magnetic field alignment that allows you to safely undergo high-resolution imaging, such as 3.0 Tesla MRIs, without any preparation, surgery or head bandaging.

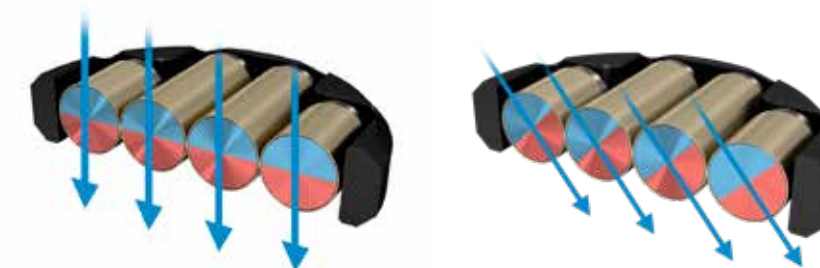


### Pain Free

Going into an MRI tube can be stressful. Not being allowed to move your head in the MRI field can increase that stress.

Our HiRes Ultra 3D cochlear implant requires no restriction on head orientation during an MRI. This means you can be more relaxed and comfortable within the magnetic field.

The magnet that provides 3D magnetic field alignment ensures that the powerful forces generated during an MRI don't cause any torque, pressure, tugging or discomfort for you, for pain-free MRI procedures every time.



### Uninterrupted Hearing

When getting an MRI, you will not need any special preparation other than taking off your sound processor. And when the scan is done, all you have to do is put it back on. With our HiRes Ultra 3D cochlear implant we provide you uninterrupted hearing, which is essential for your everyday life.

### Built Sport Tough

Our HiRes Ultra family of implants have been designed to allow you to engage in a quality of life no different from that of a non-CI user. The HiRes Ultra 3D exceeds the industry standard<sup>7</sup> for impact resistance and allows recipients to participate in everyday activities and sports without worry.





## A Life Without Limitations

At Advanced Bionics, we believe that hearing loss shouldn't keep you from the activities you love—or get in the way of staying connected with the important people in your life. We also believe you shouldn't have to face difficulties or delays if you ever need diagnostic medical imaging.

What is your favorite hobby? Outdoor sports, skiing, riding your bike — everything is possible. That's why we designed our sophisticated and durable HiRes Ultra 3D cochlear implant to give you sound clarity and comfort through every kind of activity—no matter how noisy, quiet, rough or wet.

At Advanced Bionics, we are driven by the success of the people who choose our hearing solutions, and we are honored to have the opportunity to help those with hearing loss enjoy a life without limits.



## Three reasons to choose our HiRes Ultra 3D cochlear implants

- 1. Hassle Free:** because with HiRes Ultra 3D cochlear implant you can treat an MRI like any other standard medical examination.
- 2. Pain Free:** because our innovative magnet provides 3D magnetic field alignment, so there's no pain and discomfort during an MRI.
- 3. Uninterrupted Hearing:** because the only thing that you have to do to get an MRI is to take off the sound processor and put it back on after the MRI examination.

