

Hear Your Best

with Advanced Bionics



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*"I chose AB because the
upgradeability and technology were
better than any other company."*

—Alexandra Lewis,
bilateral AB recipient



The Cernoseks
AB Recipient Family



Hear Your Best

Just as athletes train hard to achieve their best results, **AB works harder to deliver performance** to help you hear your best from moment to moment, every day.

Selecting the right cochlear implant to go the distance with you or your child is a big decision.

While the look of a cochlear implant system is important, when it comes to something as valuable as your ability to hear your best—as close to normal hearing as possible—there’s nothing more critical than reliability and performance. Choose Advanced Bionics to benefit from the only cochlear implant system that brings you the highest reliability and best performance in the world.

Five important independent studies conducted by leading research scientists show that AB will help you or your child **hear your best in quiet, noise, on the phone, and for developing language**¹⁻⁵—**the everyday listening experiences when your hearing really matters**. And a multicenter study sponsored by AB proved that **AB recipients have the best experience listening to music**.^{6,7}

Number One in Total System Reliability

When you choose AB, you'll have peace of mind knowing that you or your child can count on your cochlear implant system every day for better hearing at work, school, or play. You will experience fewer interruptions in hearing because AB offers the **highest Total System Reliability**—the reliability of both the internal and external components combined. From your baby's giggle to a cat's purr, you won't miss the special details of life when you choose the reliable AB cochlear implant system you can really depend on.



- **Highest Internal Reliability**

Made to last, AB cochlear implants implanted today demonstrate the industry's leading reliability with a **99.8%** one-year cumulative survival rate (CSR),⁸ a measure that defines the likelihood of a device continuing to function over time. You can rest assured that an AB cochlear implant will continue to work for hearing your best.



- **Highest External Reliability**

Built to survive real-world conditions, including rain, perspiration, and moisture, AB sound processors are more than **99%** reliable based on a three-month average failure rate of less than **1%**⁸, which means that you will hear longer without interruption.

AB reports and publicizes sound processor reliability data. Ask your audiologist about the external reliability rates of other cochlear implant manufacturers and how poor external reliability can impact your hearing experience.

Addison Blackmon
AB Recipient

Hear Your Best Today & Always

Why Performance Matters

Along with reliability, performance is the **most important consideration** when it comes to selecting the right cochlear implant for you or your child. As an adult recipient, you want to easily participate in the conversations that take place in noisy settings and on the telephone. You also want to **hear all the details that make the world of sound so rich**—the nuances of conversation, the complexities of a musical composition, and so much more. Children need to hear the words, inflections, and patterns essential for developing strong speech skills without caregivers having to remember to adjust their sound processors.

AB's unequalled technology and performance is designed to help ensure that you or your child *hear your best*.





The World's Best Hearing Performance

Advanced Bionics offers the world's most sophisticated technology to bring you clear, high-resolution sound in everyday settings like busy offices, noisy classrooms, and bustling restaurants. *In fact, important comparative studies conducted by leading independent researchers show that AB surpasses other cochlear implant manufacturers with better hearing performance in real-world situations.*^{1,2}

Only AB delivers the best performance by offering the industry's most advanced technology. No other cochlear implant manufacturer offers this technology.

- **ClearVoice***—*AB's breakthrough in sound processing*, designed to help you or your child hear speech better for more confident communication
- **HiResolution™ (HiRes) Sound**—*the clearest, most accurate sound* with five times more resolution than any other cochlear implant system
- **AutoSound™**—*automatically adapts to your surroundings*, just like a normal-hearing ear, so there's no fumbling with dials, switches, or remote controls to continually make adjustments for changing sound environments
- **T-Mic™ Microphone**—*the only microphone placed naturally* at the opening of the ear for highly focused hearing while providing wireless connectivity to cell phones, MP3 players, and more

**The industry-leading technology, only from AB, lets you
hear your best anytime, anywhere.**

* Pending regulatory approval in the United States

It's What's Inside that Counts



Actual size

The size and outward appearance of your cochlear implant system will not help you or your child hear any better. **To hear your best, you need what's best on the inside.** When you choose a cochlear implant system from AB, you benefit from superior internal technology now and external upgradeability for the future so that your hearing advances as the technology does—without the need for surgery. **You can count on new innovations from AB to improve your quality of life.**

Every cochlear implant manufacturer is working on smaller sound processors, but AB is also focusing on what matters most for your hearing: **Performance.** Make your choice for the right reason—hearing your best.

CLARION 1.0



CLARION 1.2



S-Series



Platinum Series Processor



Platinum BTE

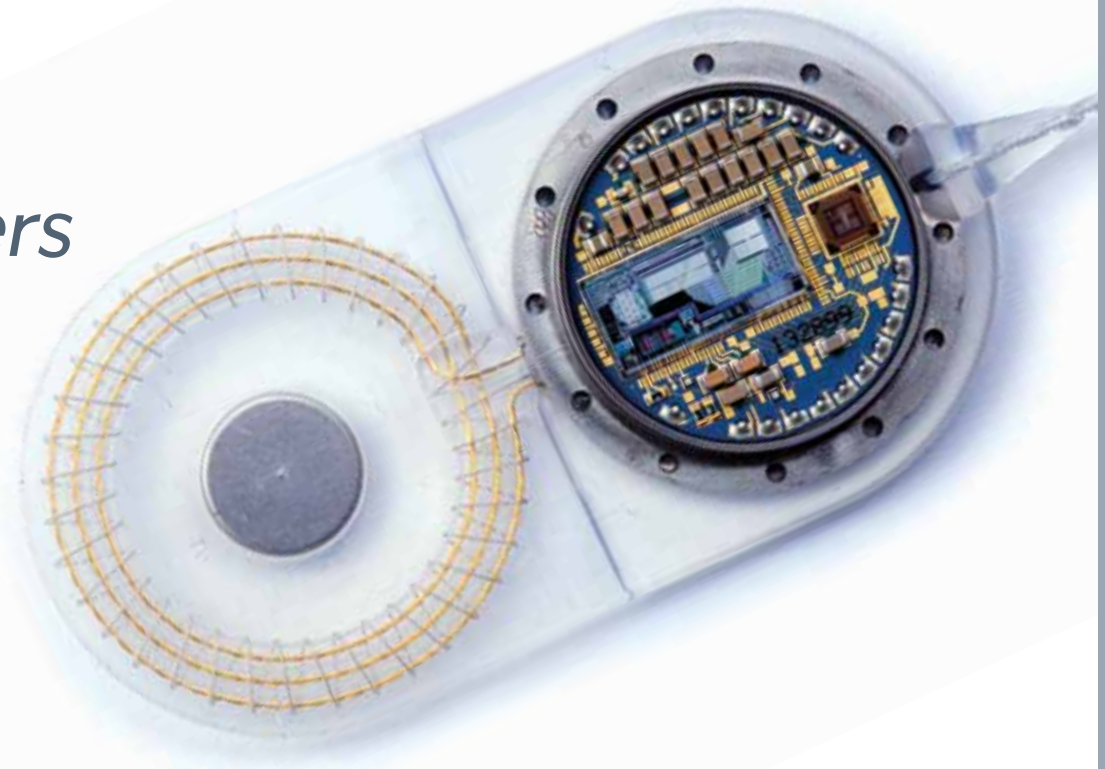


Product History Chart

1993

Processors get *smaller over time* and implant changes require surgery, so you want the *best implant technology available today.*

Why the Technology Inside Matters



It's important to choose a cochlear implant system that offers the world's most superior performance today and upgradeability for your hearing tomorrow. **You can look forward to exciting innovations in sound processors from the exclusive synergies of AB and Phonak, the leader in miniaturized hearing instruments and FM technology.** As AB's processors get smaller, performance will not be comprised. A thin behind-the-ear processor that is thin on performance will not allow you to hear your best.

HiRes 90K™ circuitry (shown above) provides nearly unlimited ways to deliver stimulation—including ways not invented yet. It is the only device with 16 current sources.

CII BTE



Auria BTE



Harmony BTE



Neptune



2011

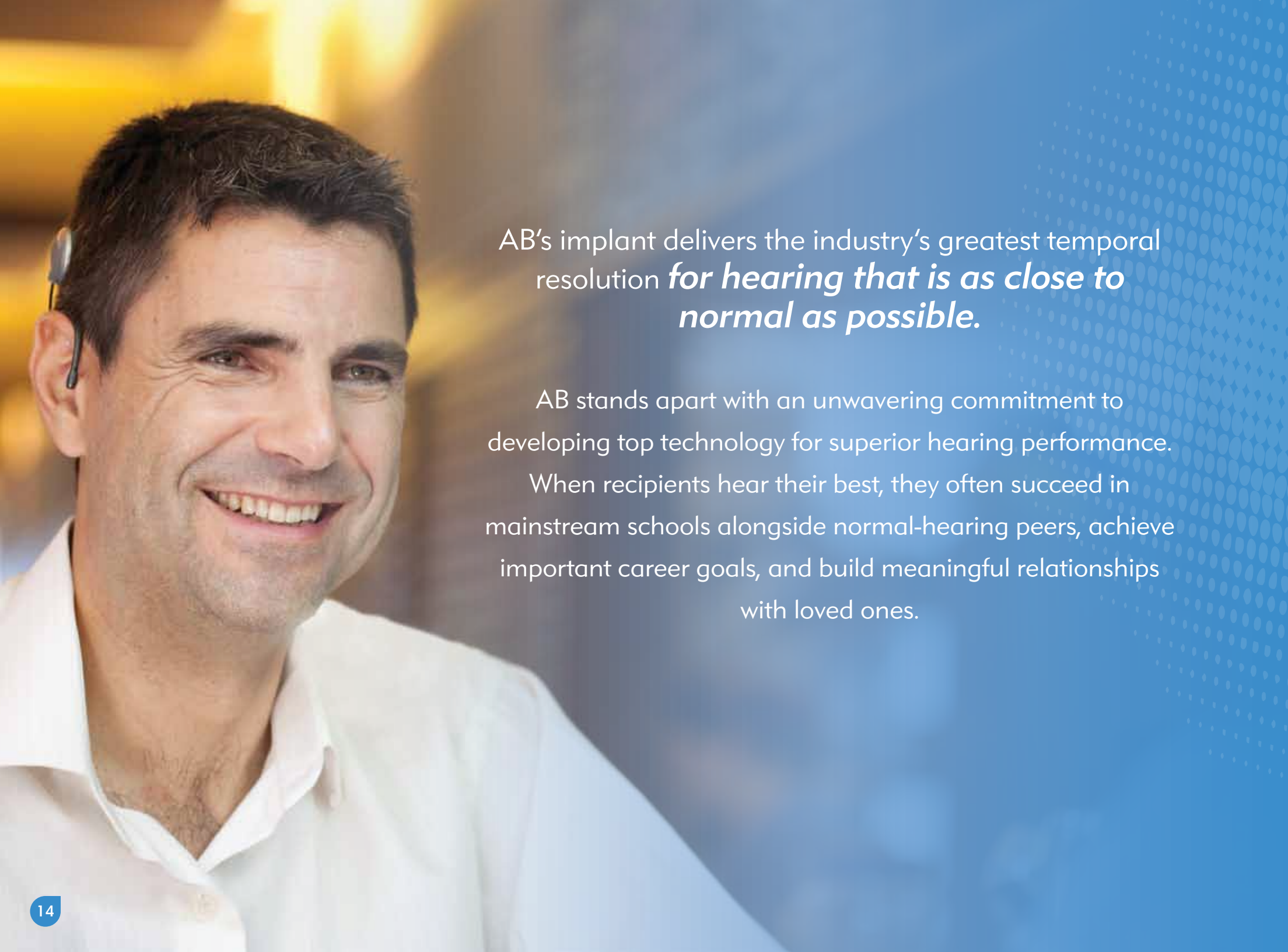
AB Technology Surpasses the Competition

Advanced Bionics has consistently made the industry's leading technological hearing advancements, including superior temporal resolution, spectral resolution, dynamic range, and stimulation flexibility designed to be the most like normal hearing.

	AB's HiResolution Bionic Ear System	Cochlear's Nucleus Freedom System	Cochlear's Nucleus 5 System	Med-El's Maestro System	Why this Matters
Temporal Resolution (Stimulation Rate, pulses per second or pps)	Up to 83,000 pps	Up to 32,000 pps	Up to 31,500 pps	Up to 50,000 pps	The faster the stimulation rate, the more accurate the timing of sound.
Spectral Resolution (Spectral Bands)	Up to 120	Up to 22	Up to 22	Up to 12	The higher the resolution, the more detailed and richer sound you hear.
Potential Pitch Percepts	460*	161*	161*	Data not available	The more pitch percepts, the better the opportunity you have to differentiate complex sounds, such as music.
Input Dynamic Range (IDR) (Decibels or dB)	Up to 80 dB	45 dB	45 dB	55 dB	The wider the range, the larger spectrum of sounds you hear.
Independent Current Sources	Multiple	Single	Single	Multiple	Multiple independent current sources allow unique sound processing strategies.
Stimulation Phase Inversion	Yes	No	No	No	Stimulation phase inversion allows unique stimulation patterns intended to provide improved tonal clarity.
Sound Coding Strategies	ClearVoice, HiRes 120-S, HiRes 120-P, HiRes-S, HiRes-P, CIS, MPS	ACE, CIS, SPEAK	ACE	FSP, HP-CIS	Every ear is different, so the more sound strategies offered, the more options you have for hearing your best.
Natural Microphone Placement	Yes	No	No	No	With AB's T-Mic, connect to audio devices like normal-hearing people do; enjoy natural, focused listening.
Case Impact Resistance	Up to 6 joules	Up to 1 joule	Up to 2.5 joules	Data not available	The more joules your cochlear implant can resist, the more impact it can take without affecting performance. From flying soccer balls to falling off a bike, you can have peace of mind knowing that AB implants are Built Kid Tough™.
Swimmable Technology	Yes	No	No	No	Only AB offers Neptune, the world's first and only waterproof, swimmable sound processor.

* Capability representative of software that is not commercially available from any cochlear implant manufacturer





AB's implant delivers the industry's greatest temporal resolution *for hearing that is as close to normal as possible.*

AB stands apart with an unwavering commitment to developing top technology for superior hearing performance.

When recipients hear their best, they often succeed in mainstream schools alongside normal-hearing peers, achieve important career goals, and build meaningful relationships with loved ones.

Einstein Would Choose AB

for 163% greater resolution with AB's advanced implant



83,000 pulses per second
Advanced Bionics



50,000 pps
Competitor B

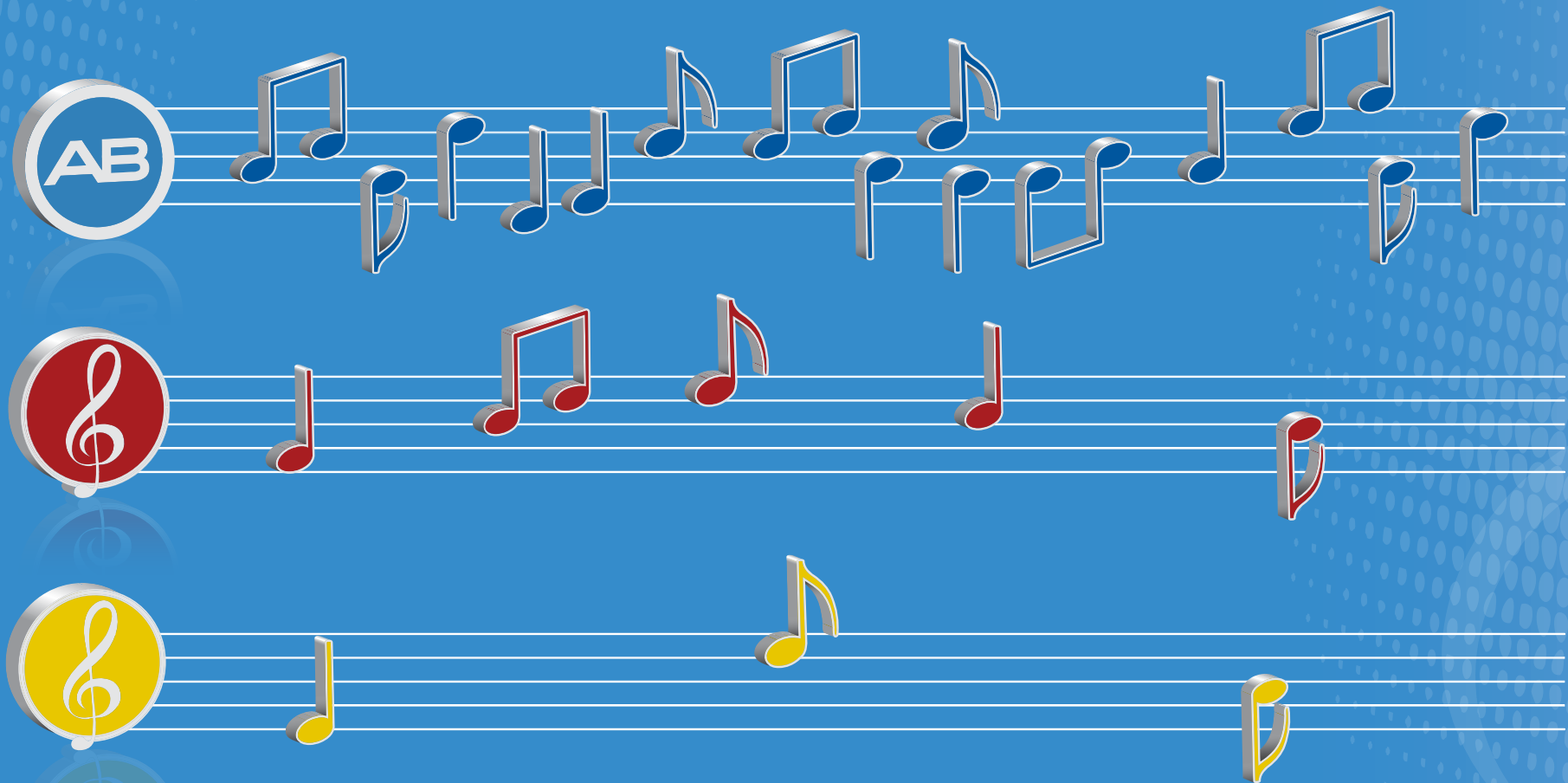


31,500 pps
Competitor A


*Compared to Competitor A

Beethoven Would Choose AB

for enjoying the full dimensions of music



	Loudness (Input Dynamic Range)	Pitch (Spectral Bands)	Timing (Stimulation Rate)	Simultaneous Current Steering
	80 dB	120	83,000 pps	Yes
	55 dB	12	50,000 pps	No
	45 dB	22	31,500 pps	No

A photograph of Jonathan Villegas, a man with dark hair and a mustache, wearing sunglasses and a black patterned shirt. He is sitting and playing an acoustic guitar. The background is a stone wall. The image is overlaid with a blue pattern of dots and several white musical notes. A circular graphic element is visible in the top right corner.

Jonathan Villegas
AB Recipient

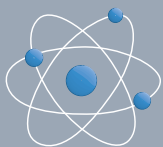
AB's advanced technology is designed to work in concert *so that you don't miss a note.*

HiRes Fidelity 120™* sound processing is the only strategy that can implement simultaneous current steering to deliver the dimensions of music (loudness, pitch, timing) for a full listening experience. AutoSound's programmable wide Input Dynamic Range (IDR) and volume control adjust automatically for your music enjoyment. And the naturally placed T-Mic microphone makes it effortless to use your MP3 player.

*HiRes Fidelity 120 is not approved for pediatric patients in the U.S.

Hear Two Times Better

in Everyday Situations



Real Science

In an independent study by experts Spahr, Dorman, and Loiselle, AB outperformed the competition on tests of everyday listening.¹ Mean sentence scores in quiet, noise and a soft level showed that AB users hear two times better than competitor users.

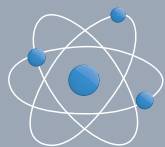


PROVEN BY SCIENCE

Hear Your Best with AB

Independent research shows that **AB outperforms the competition** in three common hearing situations: quiet environments like libraries, noisy settings like restaurants, and when speech is as soft as a whisper. AB's high spectral resolution helps you hear in these real-world settings. And unlike competitor devices, **with AB cochlear implant systems, there's no need to fumble with dials, switches, or remote controls** every time you move from quiet to loud listening environments. So whether a professor calls on you in a loud lecture hall or your spouse whispers, "I love you," with AB, you'll hear the incredible sounds that enrich your life and relationships.

Hear 150% Better *in Real-World Surroundings*



Real Science

Independent research by Haumann, Büchner, and Lenarz concluded that AB recipients hear speech 150% better in noise and everyday life situations than recipients of competitor devices.²



Deb Lenihan
AB Recipient


PROVEN BY SCIENCE

Hear Your Best with AB

Whether you're in a meeting at the office or your child is reading aloud in the classroom, **hearing speech is crucial to fully participate**. Independent research proves that **AB recipients hear speech better in noisy situations and group gatherings**. AB's unique AutoSound™ technology automatically adapts to changing listening environments so that you hear your best in everyday settings. For your child's language development, the best way to learn how to speak is to hear people speak, which is why it's important to **choose a cochlear implant system that provides the ability to hear speech in a variety of real-world settings** without adjusting your processor.

Logan Watson
AB Recipient

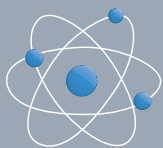
Hear 44% More Speech *in Noisy Settings*



"Hear more of the conversation with advanced technology from AB."



"Hear more of the conversation with advanced technology from AB."



Real Science

Gifford showed that 11 out of 11 AB recipients understood 44% more sentences in noise with AB's unique T-Mic™ than with a behind-the-ear (BTE) microphone.³ The competition has a BTE microphone.



PROVEN BY SCIENCE

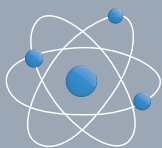
Hear Your Best with AB

Hearing in noise is a common challenge for everyone, but especially for people with hearing loss. Whether you're at a dinner party, wedding, or networking event, you want to **easily participate in the lively discussions that take place**—not struggle to keep up with the conversation. It's important to choose the cochlear implant system that performs well in these challenging settings. **Independent research shows that in noisy situations, AB helps you hear more of your world.**

Hear Soft Speech 33% Better

“You are my best friend in the world”

“You are my best friend in the world”



Real Science

An independent study conducted by Wolfe and Mears shows that 7 out of 7 AB recipients hear better with AB's wide Input Dynamic Range, than with a narrow IDR (programmed like competitor systems).

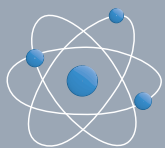


PROVEN BY SCIENCE

Hear Your Best with AB

Independent research demonstrates that AB's wide Input Dynamic Range (IDR) makes it easier to hear in the real world. **AB recipients understand soft speech much better with a wide IDR** than a narrow IDR. They're also able to hear sounds that alert you—such as telephone rings, car horns, doorbells, and alarm clocks—much better with AB's wide IDR.⁴ In the same study, **AB recipients also preferred a wide IDR over a narrow IDR for listening to music.**⁴ The competition provides a narrower IDR than AB does.

Benefit from 62% Improvement in Language



Real Science

An independent study by Bevilacqua et al. concluded that children with AB outperformed children with competitor devices by 62% on tests of auditory and oral language skills during the first six months of implantation.⁵



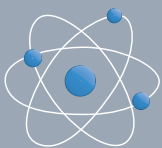
Cole Burdett
AB Recipient

PROVEN BY SCIENCE

Hear Your Best with AB

You want to **give your child the best chance at reaching every goal, surpassing every challenge, and achieving every dream.** To see your hopes fulfilled, it's crucial that your child begins to hear and speak as soon as possible. Independent research shows that during the initial six months of implant use, **children with AB technology outperform children with competitor technology in developing both the listening and speaking abilities needed to attend mainstream schools and succeed in life.**⁵ That means you can expect to hear "I love you, mommy" sooner when you choose AB for your child instead of the competition.

Enjoy Music 2.5 Times More



Real Science

In a multicenter study sponsored by AB, researchers demonstrated that AB recipients listen to music more frequently and enjoy the music-listening experience two-and-a-half times more than recipients of other cochlear implant systems.^{6,7}



PROVEN BY SCIENCE

Hear Your Best with AB

Whether you're singing your baby to sleep or listening to a chart-topping single, **music is an integral part of experiencing the richness of life.** Unfortunately, hearing and appreciating music remains one of the biggest challenges for cochlear implant recipients. Independent research proves that AB recipients have the opportunity to **hear and enjoy music better than ever before.** AB's HiRes Fidelity 120™* sound processing is the only strategy that can implement simultaneous current steering to deliver the dimensions of music (loudness, pitch, timing) for a full musical experience. With AB's advanced technology, **you can enjoy the melodies, harmonies, and rhythms of your favorite songs and performers.**

*This strategy is not approved for pediatric use in the U.S.



Kaelan Fulford
AB Recipient

AB delivers the **highest** total system **reliability**
for uninterrupted hearing you can count on.

AB offers you the most **complete**
music-listening **experience.**

AB's advanced technology provides
unmatched performance allowing a superior
hearing experience that devices from other manufacturers cannot deliver.



Olek Praglowski
AB Recipient

Preston Lee
AB Recipient

The choice is clear *hear your best* with AB

Now that you know AB will give you the best opportunity to enjoy the vibrant world of sound, take the next step by contacting the Bionic Ear Association (BEA) to speak with an audiologist or cochlear implant recipient who can answer your questions about the journey to hearing with AB.

Contact the BEA today!

Call **866.844.HEAR (4327)**

Email hear@AdvancedBionics.com

Visit AdvancedBionics.com

Independent research shows that AB
outperforms the **competition**
in real-world situations, including the most
challenging listening environments like in noisy places
and during telephone conversations.

Learn more about the science that proves performance

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