



	Baha® 6 Max Sound Processor	Baha® 5 Sound Processor	Baha® 5 Power Sound Processor	Baha® 4 Sound Processor	Why it matters
Sound processor details					
Size (Length × Width × Thickness)	26 × 19 × 12 mm	26 × 19 × 12 mm	36 × 22 × 13 mm	30 × 21 × 12 mm	The Baha 6 Max has the same small housing as Baha 5, with a higher fitting range and more power. ¹
Height from abutment	13 mm	15 mm	15.5 mm		The Baha 6 Max is more discreet with 2 mm lower protrusion than Baha 5 and 2.5 mm lower than Baha 5 Power. ²
Weight	11.5 g	9.8 g	17 g	11.6 g	The Baha 6 Max is lighter than Baha 5 Power, which means it's comfortable to wear.
Fitting range	Up to 55 dB SNHL	Up to 45 dB SNHL	Up to 55 dB SNHL	Up to 45 dB SNHL	You don't have to compromise between size and performance to experience a life rich in sound with Baha 6 Max. We've packed more power ¹ into our smallest and most discreet bone conduction sound processor.
Average Maximum Power Output	113 dB	106 dB	114 dB		Research suggests that speech understanding in noise improves with higher maximum power output (MPO) ³ and Baha 6 Max has 7 dB higher MPO* than Baha 5 and similar MPO as Baha 5 Power. ^{4,5,6}
Frequency range	200–9700 Hz	250–7000 Hz	250–7000 Hz	250–6700 Hz	Research suggests that a device with higher frequency range can improve recognition of high-frequency consonants in quiet and in noise. ³ Many important sounds are found in the higher frequencies like birds chirping, a whistle or flute and the consonants F, S, or K. Baha 6 Max has higher frequency range than Baha 5, Baha 5 Power and Baha 4. ^{4,5,6}
Visual indicator (LED)	●		●		Baha 6 Max has an LED indicator light, which helps parents and caretakers see when the processor is on and connected.
Dust and water resistance	IP68	IP63	IP63		The Baha 6 Max has higher water and dust protection compared to our earlier sound processors so you can enjoy life's everyday adventures and never worry about getting caught in the rain! This excludes the battery compartment itself. ⁷
Battery life	Typically 44–132 hours	Typically 36–84 hours	Typically 80–160 hours		At similar settings, the Baha 6 Max delivers longer battery life compared to Baha 5. ⁷ Baha 5 Power is larger in size and typically delivers longer battery life. ^{8†}
Technology & connectivity					
Transducer technology	BCDrive™ II	BCDrive™	BCDrive™	Conventional	The transducers in Baha 6 Max, Baha 5 and Baha 5 Power are symmetric electromagnetic transducers. This means the transducer has less distortion ⁹ , higher reliability ¹⁰ and better efficiency ¹¹ compared to a conventional asymmetrical transducer design found in Baha 4. The BCDrive™ transducer, introduced in 2015 for Baha 5, doubled the efficiency compared to earlier conventional transducers like the one in Baha 4 and allowed us to decrease the size of the sound processor. Now, the BCDrive II transducer in the Baha 6 Max is up to twice as efficient as BCDrive, so we've been able to keep the size small and battery consumption low while delivering significantly higher power output. ^{1,7}
Processing platform & resolution	Xidium™ 32 MIPS 24 bit resolution	Ardium™ Smart 16 MIPS 16 bit resolution	Ardium™ Smart 16 MIPS 16 bit resolution	Ardium™	The Baha 6 Max includes a brand-new chip and processing platform called the Xidium™ platform. This gives Baha 6 Max additional capabilities compared to previous generation sound processors, like increased frequency range, direct streaming to both Apple and Android devices and the ability to scan your sound environment 300 times per second. Processing power and resolution are two factors that determine the quality of the audio you hear, and the Xidium platform has enhanced both. This means Baha 6 Max is designed to give you access to more clear, rich and natural sound.
SmartSound® iQ scene classifier & noise reduction	300 scans per second	200 scans per second	200 scans per second		We've enhanced our SmartSound® iQ technology, which is designed to deliver a clear signal to give you the best possible speech understanding even in a noisy situation. ³ The Baha 6 Max scans the environment more often than our earlier sound processors to define the nature, position and characteristics of the sound and help reduce things like wind noise and help with directionality and bilateral directionality. The feedback manager in Baha 6 Max is improved compared to Baha 5 and Baha 5 Power. With Baha 6 Max we've improved our feedback manager compared to Baha 5 and Baha 5 Power, giving you access to clear sound with less interruption from unwanted noises like squeaks and squeals. Plus, the completely new impulse noise reduction feature helps make sharp, loud sounds less uncomfortable.
Direct streaming to Android™ phones	●				Baha 6 Max is the first bone conduction sound processor to have direct streaming for compatible Android devices helping you stay connected to the things you love. For compatibility information, visit www.cochlear.com/compatibility .
Direct streaming to Apple® devices	●	●	●		You can stay connected with the things that are important to you all from your compatible Apple device. For compatibility information, visit www.cochlear.com/compatibility .
Smart App	NEW Baha Smart App for iOS and Android	Baha 5 Smart App for iOS and Android	Baha 5 Smart App for iOS and Android	Baha Control App (no longer available)	The new Baha Smart App lets you change programs, adjust volume, personalize your hearing experience, and locate a missing sound processor and gives you access to more advanced sound adjustments compared to the Baha 5 Smart App.
FM connectivity	●	●	●	●	Using the Mini Microphone 2+ provides recipients access to FM connectivity in public spaces and classrooms.
Future-ready for Bluetooth® LE	●				As new technologies are always being developed, new connectivity features to help with hearing loss are just around the corner. Bluetooth LE is the next generation Bluetooth audio protocol which will open new possibilities to hear and connect. You'll be able to experience better sound quality and the new broadcast audio feature which allows streaming to unlimited devices so you can do things like connect to a compatible audio source like a TV in a public space, or tune in to the sound at the cinema, a theater, your church or a conference room. We built the Baha 6 Max to be future-ready so you'll be ready to take advantage of this new technology when it comes.

References:

1. Bergs T. Technical Report: Performance comparison A1 vs A2 actuators. Cochlear Bone Anchored Solutions AB, Sweden. 2020; D1770991.
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3. Van Eeckhoutte M, Folkeard P, Glista D, Scollie S. Speech recognition, loudness, and preference with extended bandwidth hearing aids for adult hearing aid users. Int J Audiol. 2020;20:1–12.
4. Leung B. Baha 6 Max Connect Datasheet. Cochlear Bone Anchored Solutions AB, Sweden. 2020; D1760797.
5. Land J. Baha 5 Sound Processor Connect System Datasheet. Cochlear Bone Anchored Solutions AB, Sweden. 2019; 630908.
6. Land J. Baha 5 Power Connect Datasheet. Cochlear Bone Anchored Solutions AB, Sweden. 2019; D801286.
7. Davidsson B. Technical Report: Battery autonomy in Baha 6 Max vs Baha 5. Cochlear Bone Anchored Solutions AB, Sweden. 2020; D1770958.
8. Cochlear. Baha 5 Power Connect Datasheet. Cochlear Bone Anchored Solutions AB, Sweden. 2019; D801286.
9. Bergs T. BCDrive reliability vs. conv. bone conduction transducer. Cochlear Bone Anchored Solutions AB, Sweden. 2016; D844105.
10. Flynn MC. Smart and Small – innovative technologies behind the Cochlear Baha 5 Sound Processor. Cochlear Bone Anchored Solutions AB, Sweden. 2015; 629761.
11. Bergs T. Technical Report: Performance comparison A1 vs A2 actuators. Cochlear Bone Anchored Solutions AB, Sweden. 2020; D1770991.

* MPO Measured over 0.5, 1, 2 & 4 kHz

† The Cochlear Baha 6 Max Sound Processor, with battery compartment excluded, is dust and water resistant to level IP68 of the International Standard IEC60529. Refer to the relevant user guide for more information. Tested by the RISE Research Institutes of Sweden AB.

‡ Battery life is dependent on streaming, sound environments and gain setting.

§ The Scene Classifier in SmartSound iQ measures the input sound level and signal-to-noise ratio to define and categorize the patient's acoustic environment.

Cochlear Sound Processors are compatible with Apple and Android devices. Cochlear Smart Apps are available on App Store and Google Play. For compatibility information visit www.cochlear.com/compatibility.

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Additional data derived from the following:

Cochlear. Baha 6 Max Connect Datasheet. Cochlear Bone Anchored Solutions AB, Sweden. 2020; D1760797.

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Cochlear. Baha 5 Power Connect Datasheet. Cochlear Bone Anchored Solutions AB, Sweden. 2019; D801286.

Cochlear. Baha 4 Sound Processor Datasheet. Cochlear Bone Anchored Solutions AB, Sweden. 2013; E82790