

	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.