



# The new dynamics of hearing



Product Guide  
**Zerena**

**bernafon**<sup>®</sup>  
Your hearing · Our passion

SEAMLESS  
AND  
BOUNDLESS  
HEARING.  
ANYTIME,  
ANYWHERE.\*

\*Seamless and boundless refer to device behavior.

# Welcome to the Zerena Product Guide.

Zerena is Bernafon's newest premium hearing instrument family that features the outstanding DECS™ technology, a quantum leap in the hearing industry. Dynamic Noise Management™, Dynamic Amplification Control™, and Dynamic Speech Processing™ all operate seamlessly and continuously for high performance in active and fast changing environments. Together, they offer the very best of the new dynamics of hearing.

Zerena is based on a new powerful dual-radio transmission chip that allows 2.4 GHz direct-to-the-ear streaming. Its highest precision and super-fast processing capabilities enable great sound quality and fitting flexibility.

This guide is a reference for professionals. All the information about Zerena hearing instruments is here in one place. This guide contains the details about Zerena's new technology DECS™ and its dynamic features. Additionally, styles and acoustic options are displayed, the wireless connectivity options are described, and the new fitting software Oasis<sup>next</sup> is explained.

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# Seamless and boundless hearing. Anytime, anywhere.

In real life, the environment is active and constantly changing. Surroundings can change between calm and quiet to excited and loud. One should not label the listening situation due to the possibilities of unexpected changes. This active and constantly changing real-life sound scene is our definition of a "dynamic environment". It calls for an equally dynamic hearing aid that keeps pace with the listening conditions giving instantaneous and seamless amplification.

## Real life needs a hearing aid that ...



... no longer limits the instrument performance based on environment classification rules



... allows the user to understand speech while still providing comfort even with unexpected changes



... stays in sync with the listening conditions

End users no longer have to consider their environment and determine whether they should make manual adjustments to optimize the hearing instrument. Zerena removes these boundaries so that end users can concentrate on what is happening around them and not on their devices. They can relax knowing that whatever sounds come into their environment, their hearing aids will perform as each instant requires. Zerena achieves this with new technology called Dynamic Environment Control System™ or DECS™.

The end user  
no longer has to  
consider their  
environment.

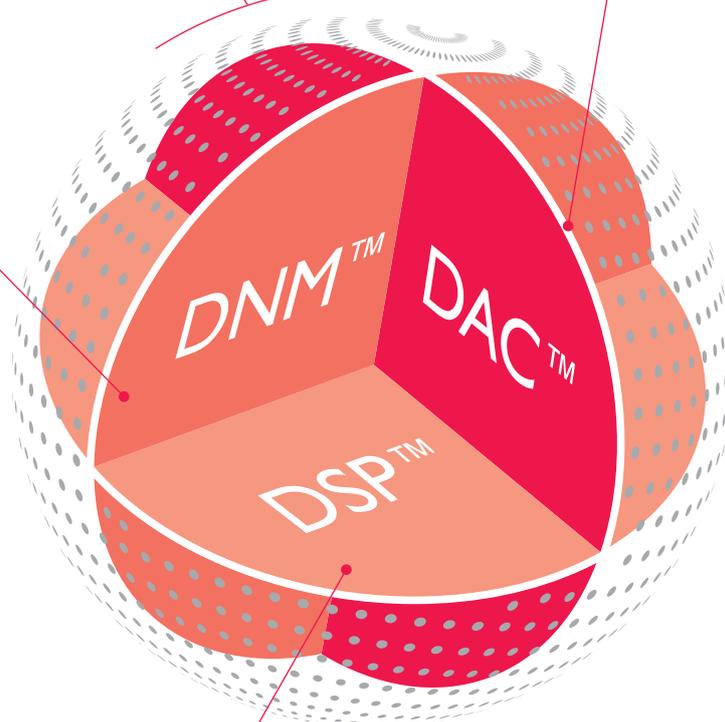
# Not just pushing the boundaries. Eliminating them.

DECS™ is Bernafon's answer for dynamic environments. This unique and innovative technology runs on a new ultra-fast chip, enabling proactive and constant changes in response to the soundscape. Four hero features lead the way:

**Dynamic Noise Management™**  
or DNM™ effectively removes noise without adversely affecting speech.

**Continuous Environment Detection**  
analyzes the environment with high-speed and precision. This is based on 32,000 data points measured per second.

**Dynamic Amplification Control™**  
or DAC™ continuously measures the speech to noise ratios and directs the information to Dynamic Speech Processing™.



**Dynamic Speech Processing™**  
or DSP™ accurately amplifies the signal based on level and the dynamic environment information received from DAC™.

# A breakthrough in technology

Zerena reflects an explicit understanding of hearing aid users, their everyday hearing challenges, and their wishes. Zerena's technology provides seamless and boundless hearing, allowing users to simply be themselves and do what they want regardless of the environment. With Zerena, Bernafon offers a relaxed and natural hearing experience.



## The chip

Zerena's super-fast and powerful chip now includes smart dual-radio wireless technology with 2.4 GHz direct-to-hearing-aid and near-field magnetic induction (NFMI) ear-to-ear technology.

# ZERENA



## Dynamic Range Extender

Live music and loud input sounds require a large dynamic range to avoid "clipping" and other distortion artifacts. With an input compression limit of up to 113 dB, Zerena provides clear, undistorted sound even in louder environments.



## OASIS<sup>nxt</sup>

Bernafon's fitting software supports an efficient and effective fitting process. Oasis<sup>nxt</sup> comes with an intuitive user interface and includes more flexibility and accuracy in the fitting process to meet individual client needs.



## DECS™

A quantum leap to dynamic features has been achieved with the outstanding DECS™ technology, allowing Zerena to adapt to changes in the environment continuously and seamlessly.



## Interaction with the internet

Zerena hearing aids are able to interact with internet-connected devices and services used in everyday life. Clients can be at the cutting edge of technology with their Zerena instruments.

# ENNA



## Tinnitus SoundSupport

Zerena implements amplification and tinnitus relief together in one solution. Support client needs with various tinnitus relief sounds as part of different sound therapies.



## The hearing instrument styles

Zerena offers a complete range of BTE, RITE (including the rechargeable miniRITE with ZPower), and custom hearing instrument styles in five performance categories.



# Technology & features

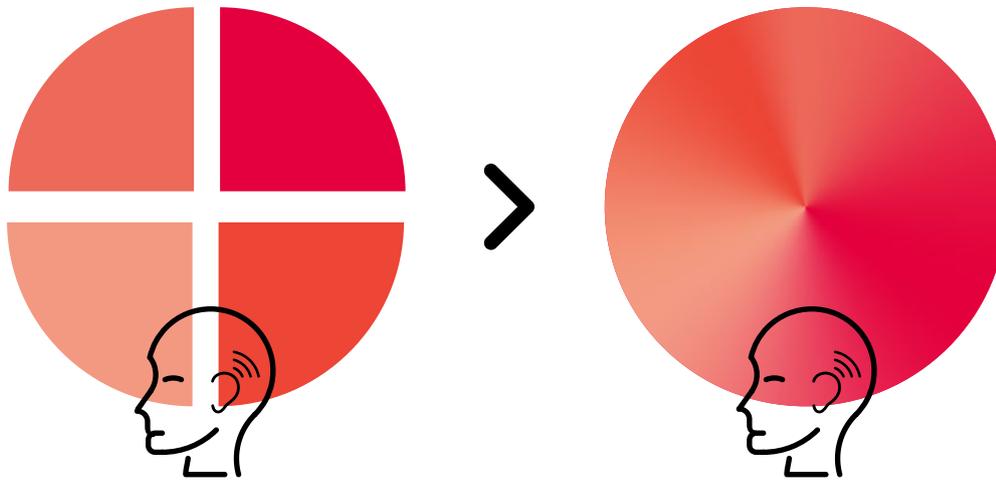


# Dynamic Environment Control System™



Real-life environments can be very dynamic, making it difficult for a traditional system to accurately adapt to listening situations. Today's environment classification systems use arbitrary limits to determine the amplification when a specific environment is detected. The resulting amplification decisions are made based on information that has already elapsed. A system that stays in sync with the changes in the environment is the ideal solution. That solution is Bernafon's Dynamic Environment Control System™ or DECS™.

DECS™ does not use hard classification boundaries. It seamlessly works in frequently changing listening environments, resulting in dynamic and seamless amplification for the user at all times.



A quantum leap from the limitation of specific environments to the freedom of all possibilities.

Previously, the hearing aid would analyze the signal based on signal modulation, signal level, and the presence of harmonics (which is normally an indication of speech). Now with DECS™, it also analyzes the signal-to-noise ratio (SNR), which enables the hearing instrument to react dynamically to the specific environmental changes.

## The proven user benefits are ...



... significantly improved speech understanding in noisy and dynamic listening situations<sup>1</sup>



... maximum comfort in highly noisy places<sup>2</sup>



... reduced listening effort making busy places less tiring<sup>3</sup>

## Continuous Environment Detection

Continuous Environment Detection in DECS™ works to constantly collect information about the environment. Whenever and however the environment changes, Continuous Environment Detection will relay the information throughout DECS™ so that the listener receives an optimized signal without any interruptions to their listening experience.

Visit our website to review our clinical evidence papers.

1) Bernafon (2017). *Dynamic Noise Management™. A Winning Team*. Topics in Amplification.

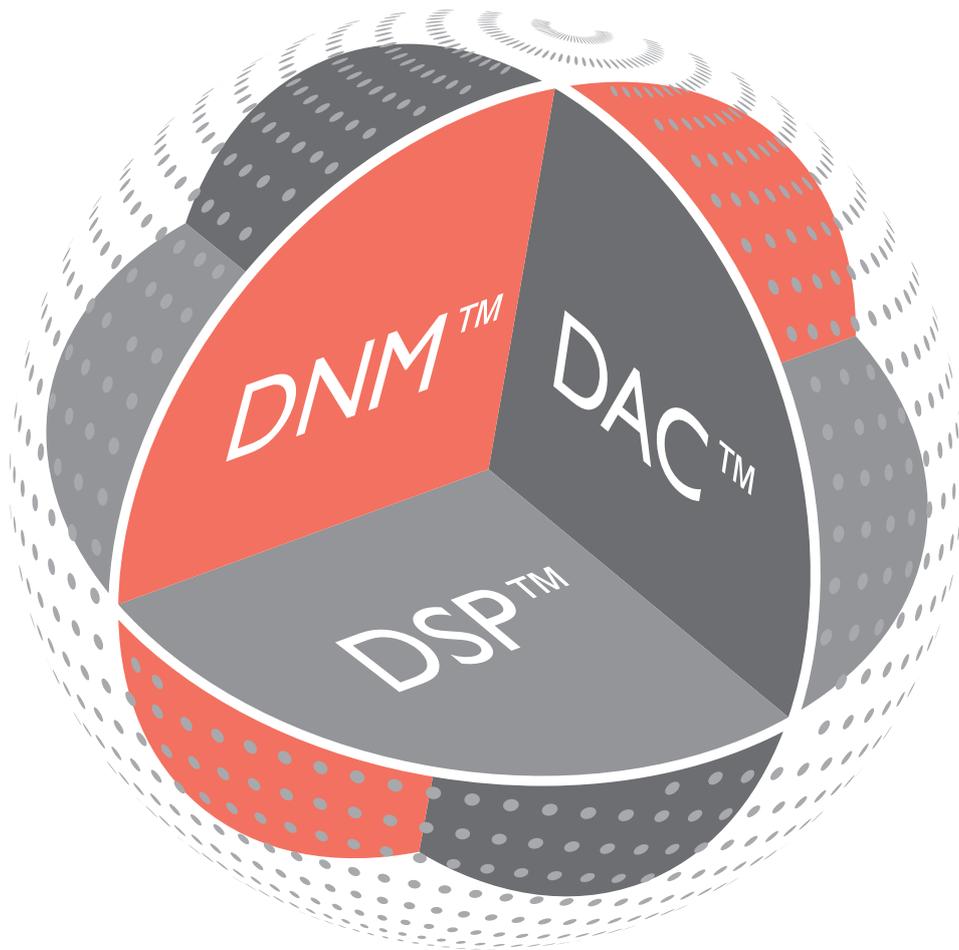
2) Bernafon (2017). *Dynamic Amplification Control™. Intelligent Amplification*. Topics in Amplification.

3) Bernafon (2017). *Benefits of Dynamic Amplification Control™ in complex listening situations*. White Paper.

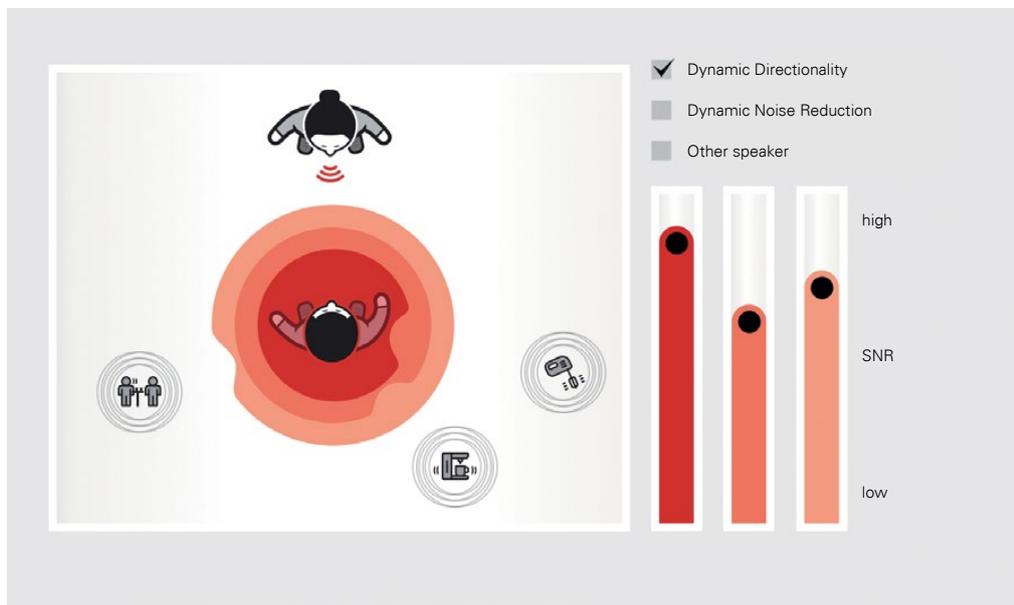
# Dynamic Noise Management™

Difficulty in understanding speech in noisy or complex environments continues to be a significant challenge for hearing aid users.

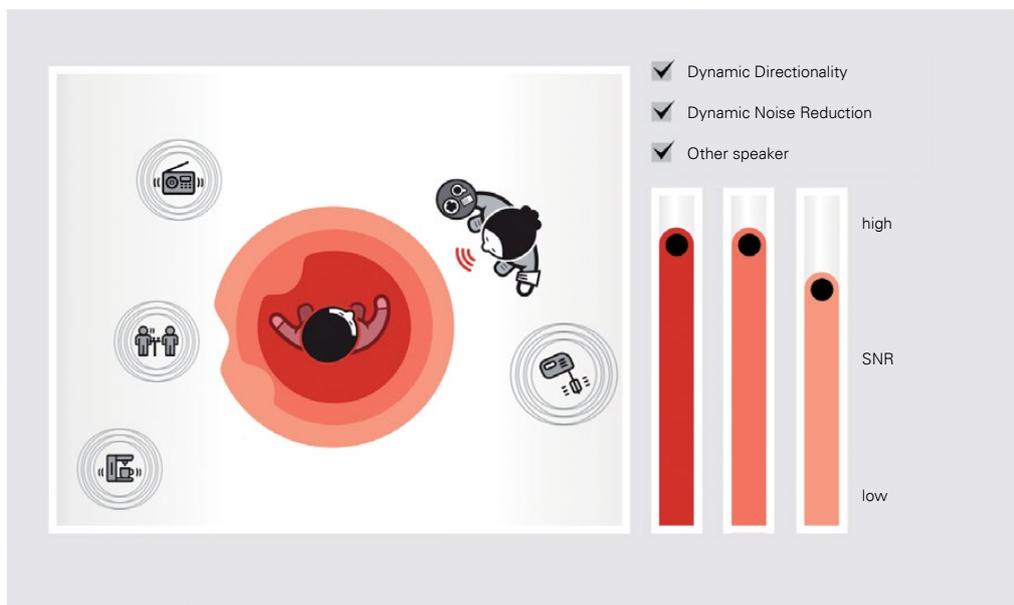
Directional systems administer various patterns (e.g., omni directional, fixed directional, adaptive directional). These options work well in a particular environment or situation but may not be flexible enough for dynamic, real-world environments that users encounter. Additionally, noise reduction systems are good at reducing noise but may inadvertently reduce speech as well. In the past, these two systems worked separately, but Bernafon now introduces DNM™ where the two systems join forces to create an optimized listening environment. The directionality system is continuously adjusting its directional patterns to reduce noise; therefore, noise reduction is only added when necessary. Noise reduction is not always needed if the directional system has sufficiently improved the SNR, meaning that with DNM™, less speech will be affected by unnecessary noise reduction.



With Dynamic Noise Management™, advanced Dynamic Directionality and Dynamic Noise Reduction are combined into a coordinated system that rapidly identifies speech in the presence of noise. Dynamic Directionality offers independent adaptive directional patterns in each of its 16 bands. The pattern in each band continuously adjusts between an omni directional and a full directional setting. Dynamic Noise Reduction further gives the appropriate amount of attenuation per individual band. The result is an optimized signal-to-noise ratio in dynamic listening environments.



Dynamic Directionality alone (top) may be enough to achieve the best possible SNR. The multiple directionality patterns set their null points to reduce noise from various angles. When noise from another angle is added (bottom), the Dynamic Noise Reduction will activate and reduce the additional noise source.

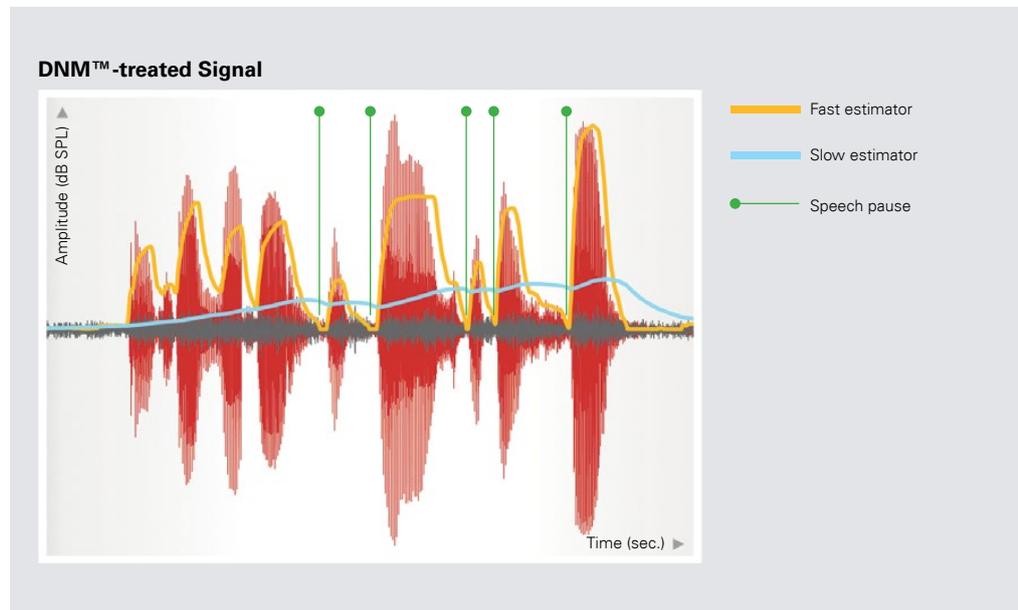


# Dynamic Amplification Control™

Dynamic Amplification Control™ or DACT™ is a smart control system that determines the speech and noise elements in a signal and then forwards that information to the signal processing to ensure controlled and accurate amplification of the signal. The speech versus noise information is essential for signal processing to apply the correct amount of compression and amplification. Therefore, in addition to the level estimation, the long-term and short-term SNR is calculated. This added SNR information helps to reduce the amplification of noise, even during speech pauses.



Fitting rationales are all optimized for speech in quiet and calculate amplification to compensate for a specific hearing loss in a stable and quiet environment. In a different environment (e.g., in noise), the amplification calculated by a fitting rationale may contradict a noise management system. The noise reduction algorithm will attempt to reduce noise while the rationale will try to apply gain to all soft sounds. Soft sounds can be speech but they can also be noise, resulting in amplified noise between speech pauses.

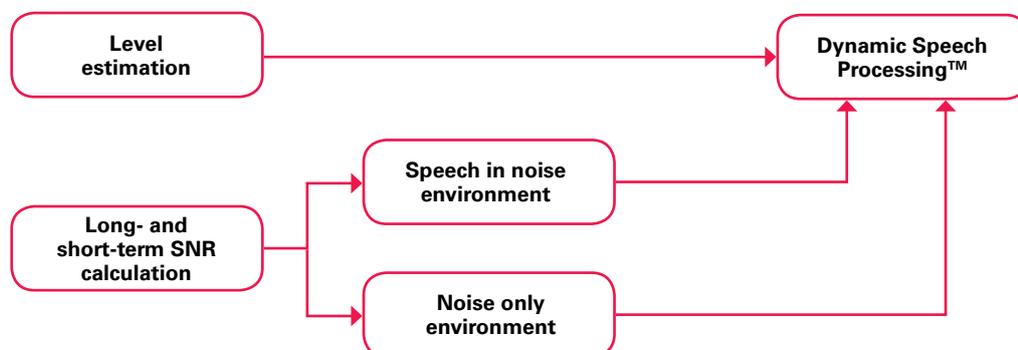


A speech signal (red) with background noise (gray), showing the long-term and short-term SNR measurements. The noise within the highlighted speech pauses could potentially be amplified; however, by using the information provided by both SNR measurements, the DSP™ applies an optimized amount of gain and compression to avoid over amplification of noise.

DAC™ analyzes the long-term and short-term SNR and then uses this information to:

- inform Dynamic Speech Processing™ or DSPTM when speech is present in noise to prevent the amplification of noise in the speech pauses;
- inform DSPTM in quiet situations to prevent the amplification of instrument or environmental sounds and in noise-only situations to maintain comfort.

Before DAC™ relays the information to the DSP™, it determines whether the environment includes speech or noise only. This further allows the DSP™ to apply the correct amount of gain to the signal.



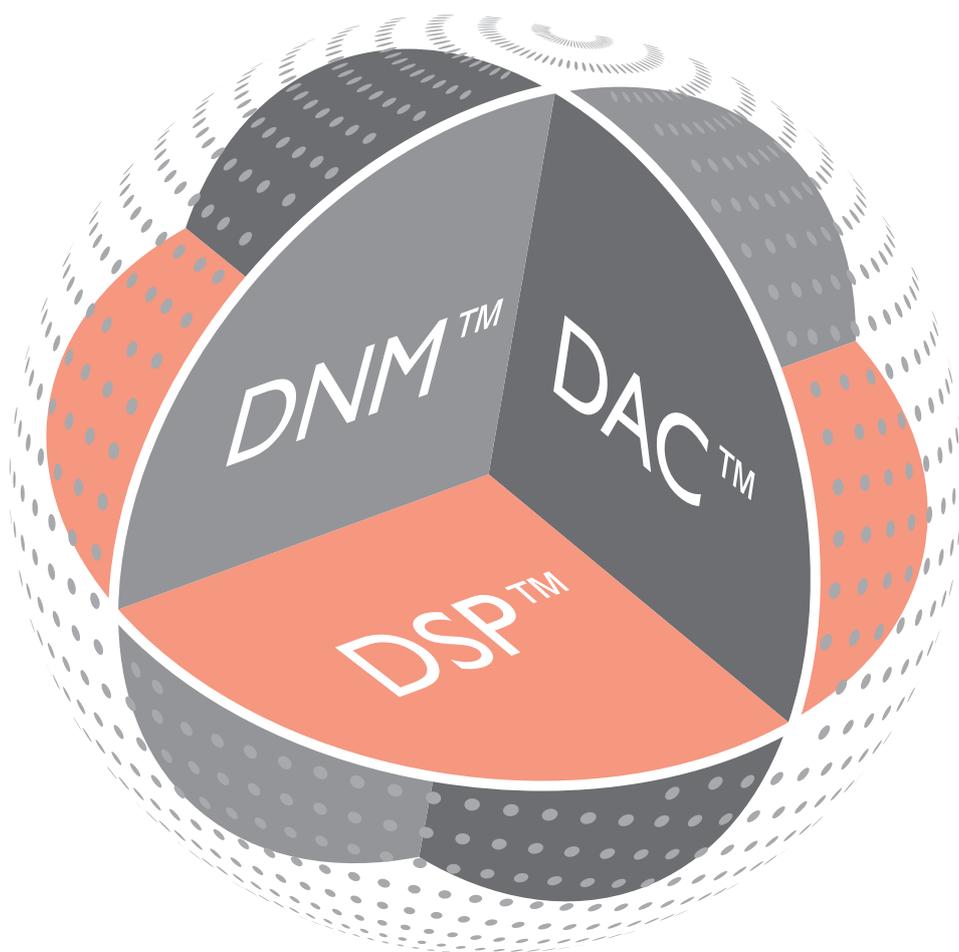
Working simultaneously with the level estimation, DAC™ calculates the long-term and short-term SNR as well as determines the presence of speech in the environment and then transfers this information to the DSP™.

# Dynamic Speech Processing™

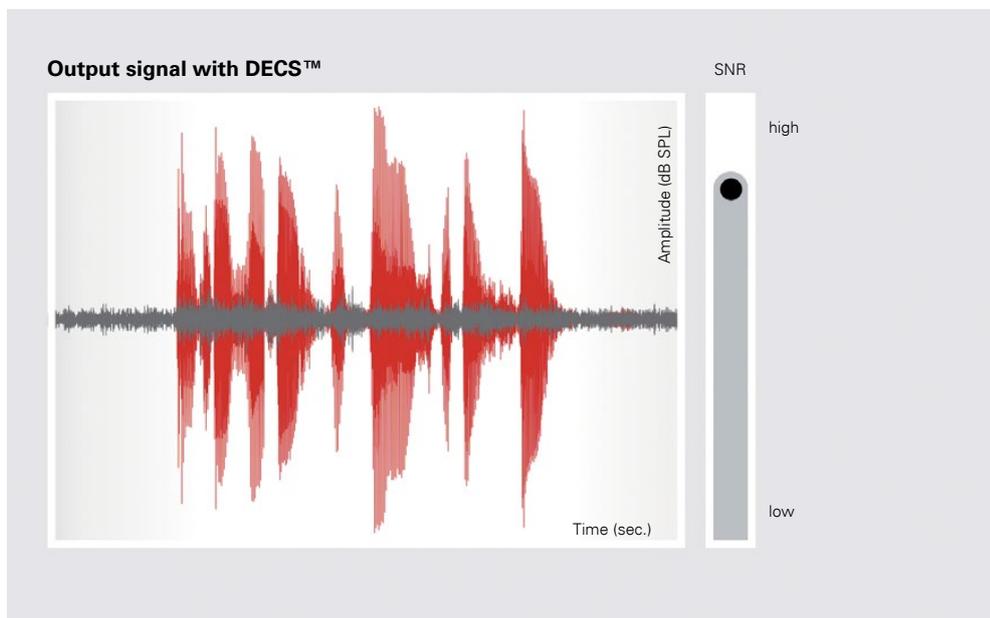
DSP™ is the signal processing component of DECS™ and is comprised of ChannelFree™ and Speech Cue Priority™.

ChannelFree™ performs by not dividing the signal into frequency channels. It adjusts the gain 20,000 times a second and amplifies each phoneme individually.

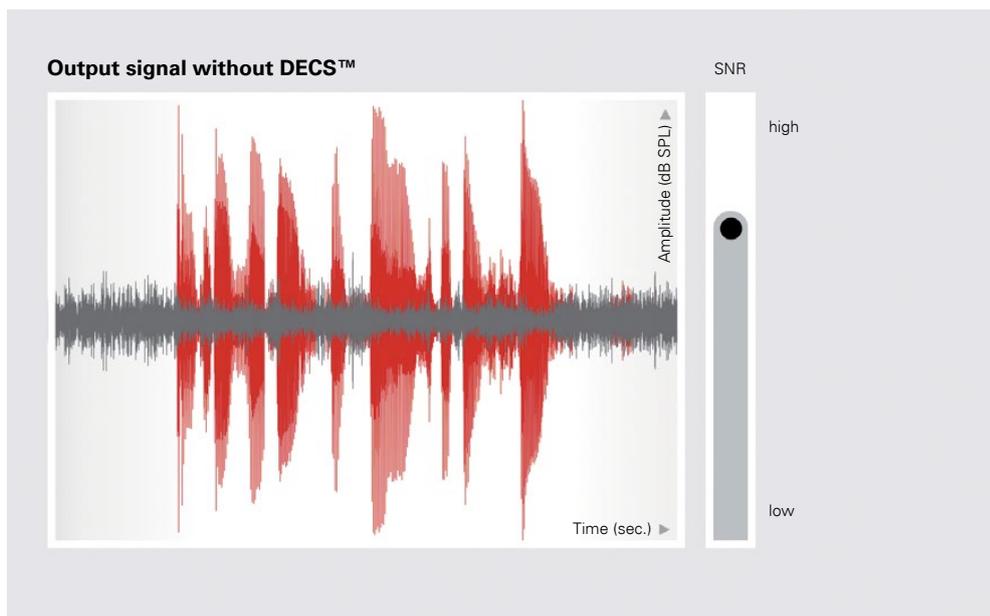
Speech Cue Priority™ individualizes the processing strategy to better match your client's needs. Phoneme Priority and Envelope Priority processing are global changes that apply to the overall processing strategy for the entire fitting.



The new DSP™ enhances the final output signal and optimizes it for environmental changes with the additional information from DAC™. DSP™ uses that information to make any necessary final adjustments to the gain and/or compression. No matter how the listening environment changes, the listener will receive the appropriate amount of gain and compression for optimized speech comprehension.



The signal on the top has been processed with DECS™. The output SNR is higher than the signal on the bottom without DECS™.



# Dynamic Range Extender

Live music and other loud input sounds often require a large dynamic range to avoid “clipping” and other distortion artifacts. The loudness of typical daily sounds can be underestimated. For example, the average loudness of the subway can be as loud as 90 dB and a hairdryer or kitchen blender between 80 – 90 dB\*. These are average measures; therefore, the peak sounds could potentially reach higher levels. A traditional hearing instrument will reduce loud input levels. This can result in distortion and “clipping” of the output even for daily sounds that many people would not consider extraordinarily loud.

Zerena 9 benefits from an adaptive extended dynamic input range in all listening programs. The hearing instrument adapts the input level for signals up to 113 dB SPL, allowing for the amplification of daily loud sounds without distortion. Therefore, when coupled with a 10 kHz bandwidth, Zerena 9 gives the user a more natural listening experience. The Live Music Program offers a fixed extended dynamic input range of 113 dB SPL to maintain the high sound quality of live music. It is available in all performance categories.

Noise chart with average decibel levels for everyday sounds\*

Fireworks at 1 meter (3 feet)	150 dB
Jet engine	140 dB
Jackhammer	130 dB
Jet plane take-off, siren	120 dB
Mpo of some mp3 players	110 dB
Gas lawnmower, snowblower	106 dB
Hand drill	100 dB
Subway, passing motorcycle	90 dB
Hairdryer, kitchen blender	80 – 90 dB
Busy traffic, vacuum cleaner, alarm clock	70 dB
Typical conversation	60 dB

Dynamic Range Extender delivers an improved overall sound quality for the premium Zerena 9 instruments, and ensures that music has the highest possible input range to preserve the unique sound quality of live music.

\*American Speech Language and Hearing Association (<http://www.asha.org/public/hearing/Noise/>)

# Adaptive Feedback Celler

Adaptive Feedback Celler uses an effective method for reducing feedback. For hearing instrument users, the goal is to preserve a fitting as open as possible with the appropriate gain needed to compensate for their hearing loss, along with a sense of assurance that the acoustic feedback will not disrupt their lives.

Bernafon's Adaptive Feedback Celler detects and removes acoustic feedback signals before they become audible to the user. The strength of the system is its ability to respond to changes in the feedback path that occur when answering the telephone, putting on a hat, giving a relative a hug, or adjusting the volume control. Your client can perform these normal daily activities without worrying about how their hearing aids are going to react when they come into close contact with something or someone.

During the hearing instrument fitting, the feedback path is typically static and feedback may be well controlled. Adaptive Feedback Celler also cancels feedback when the feedback path changes, so it will stay effective in everyday life even when placing an object near to the ear.

Bernafon's Adaptive Feedback Celler detects and removes acoustic feedback signals before they become audible to the user.

# Tinnitus SoundSupport

For many patients, amplification is an effective first step in managing their tinnitus and they should not have to compromise on the performance of their hearing instruments. With our combined hearing and tinnitus instruments, Tinnitus SoundSupport is easily activated and adjusted to accommodate your clients' changing tinnitus needs. The sound generator has the flexibility of dual or single volume control adjustment and operates within safe limits of noise exposure as set by international standards.

There are multiple relief sounds available. However, sound choices do not increase complexity. To make it easy, Bernafon offers a simple starting point. The personalized broadband sound option is based on the client's audiogram and is targeted to match their thresholds.

**Tinnitus SoundSupport  
is easily activated and  
adjusted.**

# Tinnitus SoundSupport options

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## Ocean sounds

Cover a broad frequency spectrum;  
are dynamic with relaxing qualities

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## Shaped to audiogram sounds

A personalized broadband sound based on the client's audiometric frequency thresholds; offers a quick and easy starting point

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## Broadband sounds

Offer the options of either white sound – a broadband signal with a flat spectrum, or pink or red sounds – broadband sounds that reduce the high frequency content by -3 and -6 dB per octave; traditionally used in tinnitus sound therapy

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## Modulation sounds

Vary in amplitude over time; four modulation options can be applied to any of the broadband sounds; gives more options to find a sound to meet the client's preferences

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## Automatic level steering

Automatically controls the relief sound and reduces it when environment sounds are loud enough to provide relief and increases the relief sound when environment sounds are reduced

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## Separate volume control

Allows the relief sound to be adjusted manually in one or both ears by the client; meets the demand of various tinnitus treatment protocols and provides a manual option for those that prefer to control the relief sound themselves

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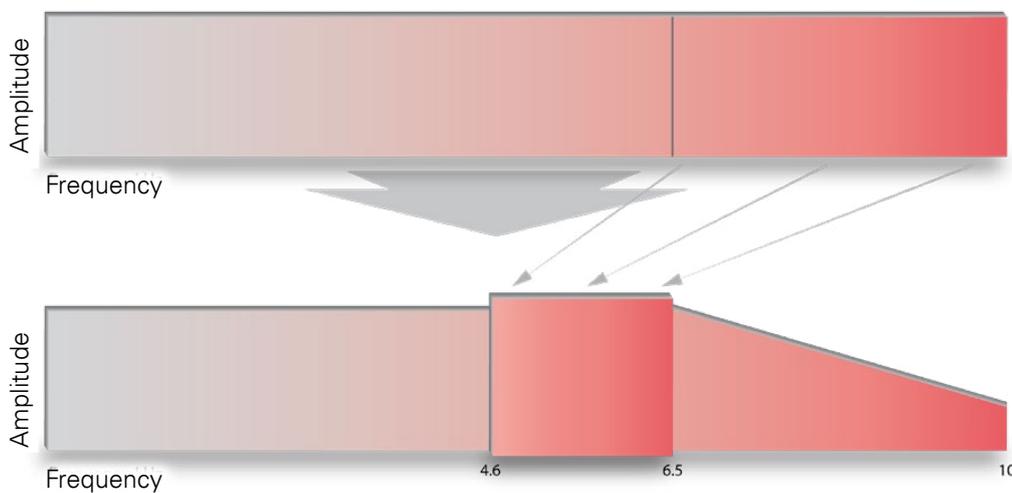
# Frequency Composition<sup>nxt</sup>

Sensorineural hearing loss, depending upon the degree, may be accompanied by one or more dead regions in the cochlea – generally in the high frequencies. Amplification within a cochlear dead region, where the inner hair cells and/or neurons are no longer functioning, will most likely not improve audibility and may cause distortion. Better cochlear function is normally available in the lower frequency regions.

Bernafon's established Frequency Composition™ feature takes information from a frequency region where it cannot be resolved by the cochlea and superimposes it onto a lower frequency region where the information can be used. The original frequencies nonetheless remain audible to clients with residual hearing capabilities. This prescription method uses established principles from Cambridge University as described by Robinson, Baer, and Moore (2007).

New Frequency Composition<sup>nxt</sup> gives the opportunity for further fine-tuning of this feature. It now offers ten source and destination ranges. Frequency Composition<sup>nxt</sup> takes the source information from more tailored regions and superimposes it into an equally narrow destination range to avoid impacting bordering regions unnecessarily. Additionally, there are now seven intensity settings that contribute to more finite steps between levels.

Amplify the original high-frequency information as part of the entire signal or attenuate those high frequencies. This additional new option is the High Frequency Attenuation option. Activate it with just one click.



High-frequency information is transferred and superimposed to a lower frequency destination. The entire original signal can be amplified or the high frequencies can be attenuated.

Robinson, J.D., Baer, T., & Moore, B.C. (2007). Using transposition to improve consonant discrimination and detection for listeners with severe high-frequency hearing loss. *International Journal of Audiology*, 46, 293-308.

The increased source and destination ranges allow more flexibility to configure the behavior of the hearing aid and, to specifically match your client's high-frequency needs. The increased intensity levels help clients acclimatize to Frequency Composition<sup>next</sup> at their own pace.

- | Intensity settings             |
|--------------------------------|
| <input type="checkbox"/> -2 dB |
| <input type="checkbox"/> 0 dB  |
| <input type="checkbox"/> 2 dB  |
| <input type="checkbox"/> 4 dB  |
| <input type="checkbox"/> 6 dB  |
| <input type="checkbox"/> 8 dB  |
| <input type="checkbox"/> 10 dB |

- | Source and destination ranges          |
|--|
| <input type="checkbox"/> 1,5 – 2,4 kHz |
| <input type="checkbox"/> 1,8 – 2,7 kHz |
| <input type="checkbox"/> 2,1 – 3,0 kHz |
| <input type="checkbox"/> 2,3 – 3,2 kHz |
| <input type="checkbox"/> 2,6 – 3,5 kHz |
| <input type="checkbox"/> 2,7 – 4,0 kHz |
| <input type="checkbox"/> 2,9 – 4,1 kHz |
| <input type="checkbox"/> 3,4 – 4,6 kHz |
| <input type="checkbox"/> 3,5 – 5,1 kHz |
| <input type="checkbox"/> 4,0 – 5,5 kHz |

A list of the intensity setting and source and destination ranges in Frequency Composition<sup>next</sup>.

# Feature overview

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## 2.4 GHz wireless technology

With 2.4 GHz direct-to-ear technology, your clients are free of intermediate devices when connecting with other wireless devices.

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## Adaptation Manager

Help your client to get accustomed to their new hearing aids at their own pace by using the Adaptation Manager. It increases the gain automatically based on the rate that best fits each client.

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## Adaptive Feedback Canceller

The Adaptive Feedback Canceller controls feedback before it begins.

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## Binaural Noise Manager

Apply noise reduction to each ear independently depending on the input. Clients will benefit from noise being reduced on one side while speech is still amplified appropriately from the other side.

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## ChannelFree™

Bernafon's proprietary signal processing adjusts the gain 20,000 times a second and amplifies each phoneme individually.

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## Continuous Environment Detection

Continuous Environment Detection works to constantly collect information about the environment and relay the information throughout DECS™.

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## DECS™

Dynamic Environment Control System™ uses a combination of systems to ensure that amplification of the hearing aid keeps pace with dynamic environment changes.

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## Dynamic Amplification Control™

Based on information provided continuously from the environment, DAC™ transfers information to the DSP™ to ensure that the correct amount of compression and gain are added to the signal.

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## Dynamic Noise Management™

Based on information provided continuously from the environment, DNM™ determines the configuration of the directionality and noise reduction instantaneously.

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## Dynamic Range Extender

Dynamic Range Extender allows a greater input signal to be processed resulting in better sound quality for your client.

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## Dynamic Speech Processing™

Using the environment information transferred by DAC™, DSP™ adds the necessary adjustments of the gain and compression to the signal so that the client receives continuously corrected output to keep up with dynamic environments.

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## EasyControl-A

With this app, users have access to internet-connected devices and services. The app can also be used to regulate volume, change program, mute hearing aids, view battery level, etc.

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## Frequency Composition<sup>nxt</sup>

Makes high-frequency information available at lower-frequency regions for those that cannot process the high-frequency information.

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## Low Frequency Enhancer

The Low Frequency Enhancer is a setting that allows you to increase the low-frequency signals from wireless devices such as the TV-A, the mobile, etc.

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## NFMI

NFMI stands for near-field magnetic induction. It provides a faster and seamless communication between the two hearing instruments with low power consumption.

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## Oasis<sup>nxt</sup>

A new version of Oasis that offers revised software but has the same easy-to-follow fitting flow as before. New tools offer more opportunity to customize the fitting.

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## Rechargeability

Every Zerena miniRITE hearing instrument can turn into a rechargeable device. Exchange the battery door and insert the silver-zinc microbattery from ZPower.

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## RC-A

Clients can adjust their Zerena hearing instruments with an easy-to-use remote control. RC-A communicates with the hearing instruments using 2.4 GHz technology.

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## SoundClip-A

The all-rounder for hands-free phone conversation from iPhone® and modern smart phones, for communication at a distance and in very noisy environments, and to regulate the hearing instruments' volume and to pick up phone calls.

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## Speech Cue Priority™

Select the signal processing style to match your clients. Some clients perform better with the Phoneme Priority setting while others prefer the Envelope Priority setting.

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## Tinnitus SoundSupport

Implements amplification and tinnitus relief at the same time with various sound relief options and controls.

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## Transient Noise Reduction

Loud, unexpected sounds are managed with Transient Noise Reduction. An additional setting of Transient Noise Reduction will give you more programming flexibility.

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## TV-A

TV-A streams the sound from the TV directly to Zerena. Dolby Digital Stereo is now supported.

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## Wind Noise Manager

The Wind Noise Manager preserves comfort and speech in the presence of wind.

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# Hearing instrument styles & accessories



# Attractive BTE design



## Zerena miniRITE

is an extremely stylish yet discreet receiver-in-the-ear hearing instrument, suitable for mild to severe hearing losses.

## Zerena miniRITET

is a small receiver-in-the-ear hearing instrument, suitable for mild to severe hearing losses, with a telecoil and volume control buttons.

## Zerena BTE 105

is a strong, modern behind-the-ear hearing instrument for users with moderate to severe hearing losses.

TOP SHELL	JEBL	COBR	MAC	MSIL	SABL	ANBR	MAC	MSIL	SABL
	jet black	cocoa brown	metallic anthracite	metallic silver	sand beige	antique bronze	metallic anthracite	metallic silver	sand beige
BASE SHELL	MSIL metallic silver				metallic anthracite MAC				

Made for iPhone® hearing aids that do support Bluetooth® Low Energy (BLE) at 2.4 GHz

hydrophobic coating to repel liquid

IP68 rated for protection against ingress of dust and water



**Zpower®**

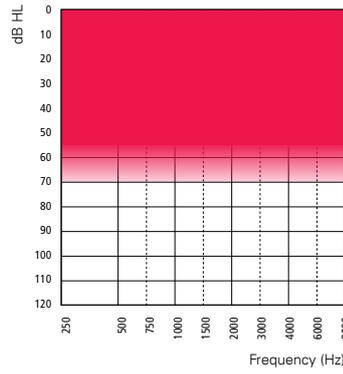
wide range of colors to meet individual preferences

BernaFon S-shape design for high wearing comfort

miniFit system including various speaker and thin tube options, domes, and custom molds

rechargeable option from ZPower available for the miniRITE style

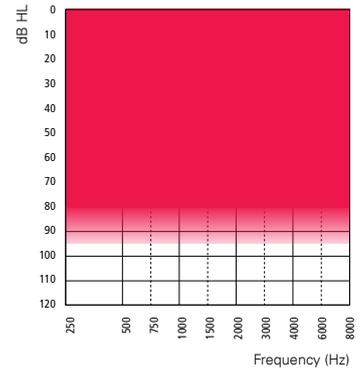
**miniRITE & miniRITE T  
60-SPEAKER**



**2CC COUPLER** | **EAR SIMULATOR**

OSPL90, PEAK	105 dB SPL	115 dB SPL
FULL-ON GAIN, PEAK	34 dB	45 dB
OSPL90, HFA	101 dB SPL	-
FULL-ON GAIN, HFA	28 dB	-

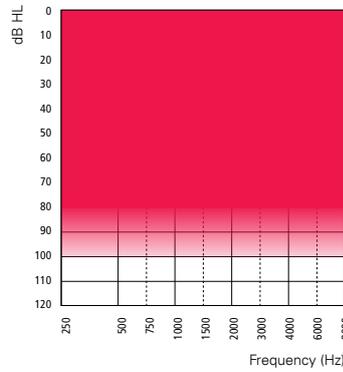
**miniRITE & miniRITE T  
85-SPEAKER**



**2CC COUPLER** | **EAR SIMULATOR**

OSPL90, PEAK	115 dB SPL	126 dB SPL
FULL-ON GAIN, PEAK	54 dB	64 dB
OSPL90, HFA	112 dB SPL	-
FULL-ON GAIN, HFA	46 dB	-

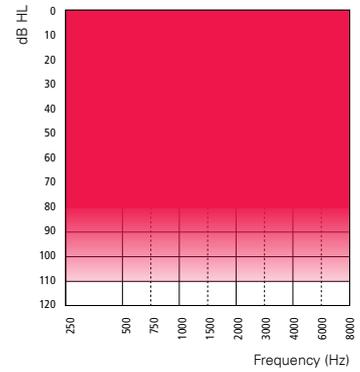
**miniRITE & miniRITE T  
100-SPEAKER**



**2CC COUPLER** | **EAR SIMULATOR**

OSPL90, PEAK	123 dB SPL	131 dB SPL
FULL-ON GAIN, PEAK	57 dB	66 dB
OSPL90, HFA	120 dB SPL	-
FULL-ON GAIN, HFA	52 dB	-

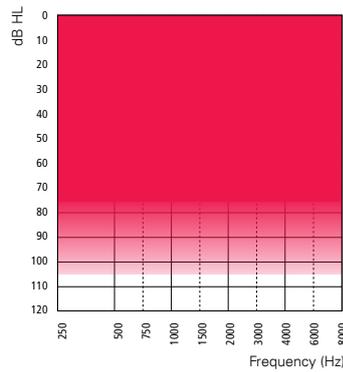
**miniRITE & miniRITE T  
105-SPEAKER**



**2CC COUPLER** | **EAR SIMULATOR**

OSPL90, PEAK	126 dB SPL	133 dB SPL
FULL-ON GAIN, PEAK	63 dB	70 dB
OSPL90, HFA	122 dB SPL	-
FULL-ON GAIN, HFA	57 dB	-

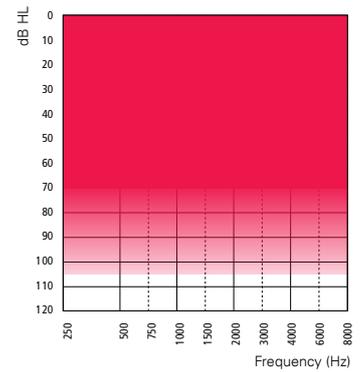
**BTE I05  
EARHOOK  
(Undamped earhook)**



**2CC COUPLER** | **EAR SIMULATOR**

OSPL90, PEAK	131 dB SPL	138 dB SPL
FULL-ON GAIN, PEAK	66 dB	73 dB
OSPL90, HFA	126 dB SPL	-
FULL-ON GAIN, HFA	62 dB	-

**BTE I05  
THIN TUBE I.3**



**2CC COUPLER** | **EAR SIMULATOR**

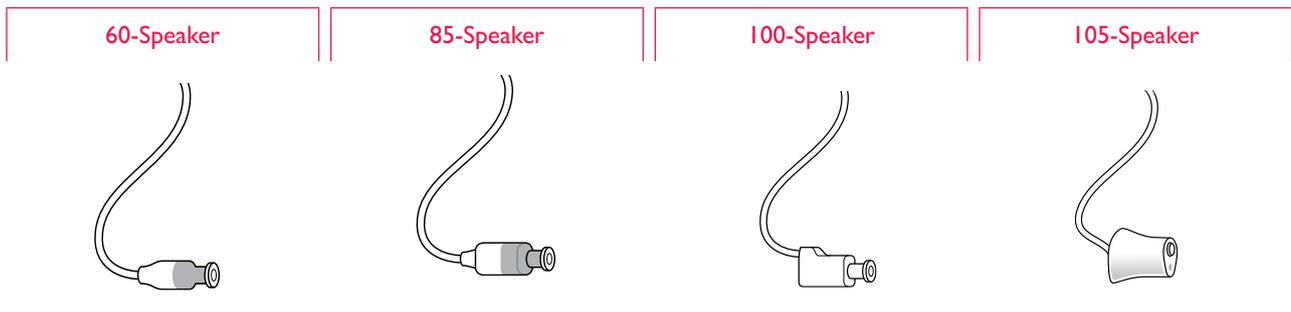
OSPL90, PEAK	129 dB SPL	132 dB SPL
FULL-ON GAIN, PEAK	66 dB	69 dB
OSPL90, HFA	118 dB SPL	-
FULL-ON GAIN, HFA	54 dB	-

# BTE fitting options

Connect Zerena hearing instruments to a wide range of acoustic options to create a perfect fit for clients.

## miniFit speaker system for Zerena miniRITE and miniRITET

The miniFit speaker system has four different speaker types for mild to severe hearing losses that are all available in four different speaker lengths.



**miniFit domes**

miniFit domes come in various types and sizes and can be attached to both the miniFit speaker and the miniFit thin tube system.

miniFit domes are made out of silicon and maintain a high retention force on the receiver and in the ear. The silicon material helps to strengthen the durability of the domes.

		5 mm	6 mm	8 mm	10 mm	12 mm
Open Dome		•	•	•	•	
Bass Dome, Double Vent			•	•	•	•
Bass Dome, Single Vent			•	•	•	•
Power Dome			•	•	•	•

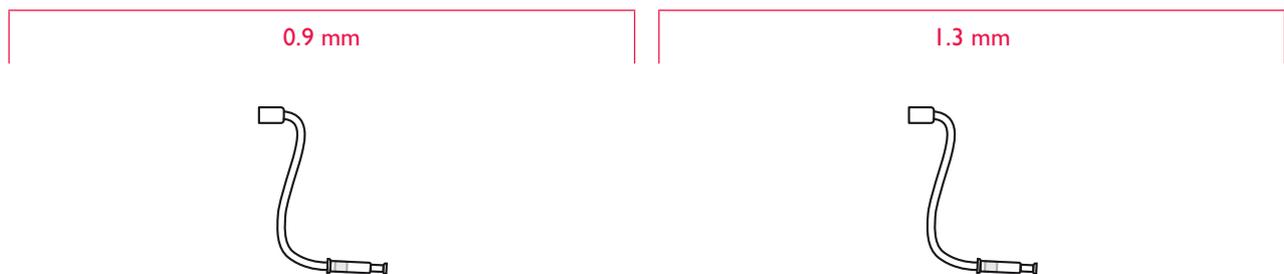
**Custom molds**

Attach a wide range of custom molds to the miniFit speaker and thin tube system. Integrated wax filters in the custom molds prolong the longevity of the earpieces.

		60- Speaker	85- Speaker	100- Speaker	105- Speaker	Thin Tube
Power Mold				•	•	
Micro Mold		•	•			•
Lite Tip		•	•			
VarioTherm® Micro Mold		•	•			•
VarioTherm® Lite Tip		•	•			

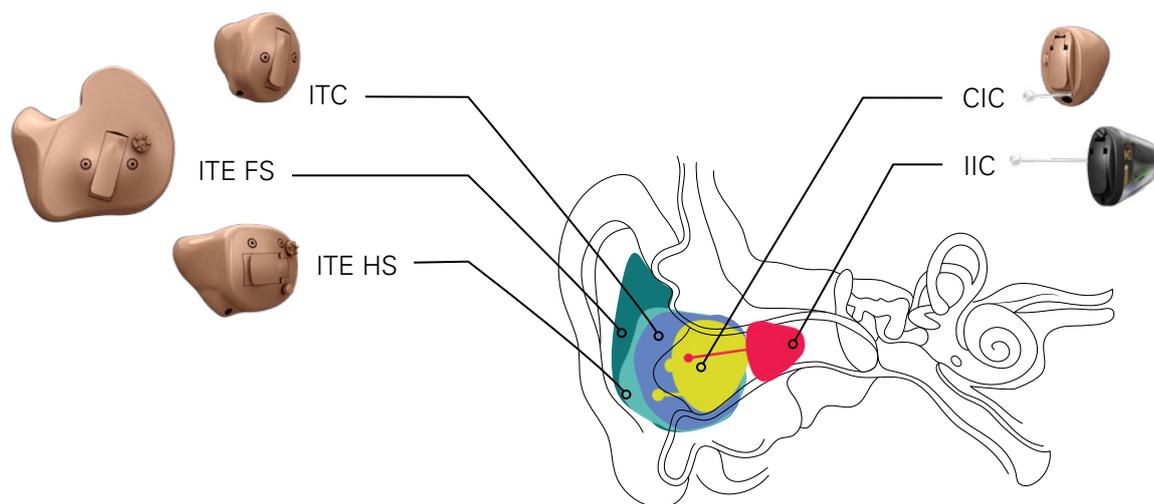
**miniFit thin tube system for Zerena BTE 105**

Zerena BTE 105 uses the standard earhook or the miniFit thin tube system. miniFit thin tubes come in two sizes and four different lengths.



# Fitting flexibility with custom hearing instruments

Zerena custom instruments come in five basic styles with a large number of fitting options.

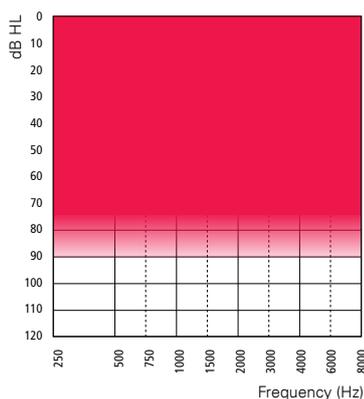


\*For IIC only

Options	IIC	CIC	ITC	ITE (HS, FS)	ITE (HS, FS)
Battery size	10	10	312	312	13
Fitting levels	75/85	75/85	75/85/90/100	75/85/90/100	75/85/90/100
NFMI	—	◦	●	●	●
2.4 GHz wireless	—	—	◦*	◦*	◦
Directionality	—	—	●	●	●
Push button	—	◦	◦	◦	◦
Volume control	—	—	◦	◦	◦
Telecoil	—	—	◦*	◦*	◦
Auto Telephone	—	—	◦	◦	◦

● Standard    ◦ Optional    — Not available    \* Not available simultaneously

**IIC, CIC, ITC, ITE HS, ITE FS  
75-SPEAKER**

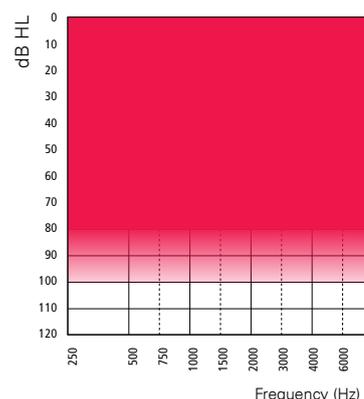


IIC*	2CC COUPLER	EAR SIMULATOR
OSPL90, PEAK	108 dB SPL	119 dB SPL
FULL-ON GAIN, PEAK	41 dB	53 dB
OSPL90, HFA	102 dB SPL	-
FULL-ON GAIN, HFA	38 dB	-

CIC*	2CC COUPLER	EAR SIMULATOR
OSPL90, PEAK	109 dB SPL	119 dB SPL
FULL-ON GAIN, PEAK	47 dB	57 dB
OSPL90, HFA	104 dB SPL	-
FULL-ON GAIN, HFA	42 dB	-

ITC, ITE HS, ITE FS*	2CC COUPLER	EAR SIMULATOR
OSPL90, PEAK	108 dB SPL	119 dB SPL
FULL-ON GAIN, PEAK	45 dB	53 dB
OSPL90, HFA	103 dB SPL	-
FULL-ON GAIN, HFA	41 dB	-

**IIC, CIC, ITC, ITE HS, ITE FS  
85-SPEAKER**

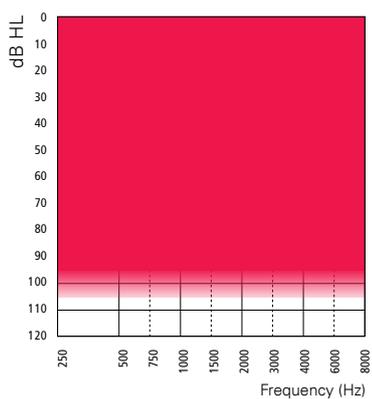


IIC*	2CC COUPLER	EAR SIMULATOR
OSPL90, PEAK	116 dB SPL	126 dB SPL
FULL-ON GAIN, PEAK	47 dB	58 dB
OSPL90, HFA	113 dB SPL	-
FULL-ON GAIN, HFA	46 dB	-

CIC*	2CC COUPLER	EAR SIMULATOR
OSPL90, PEAK	118 dB SPL	126 dB SPL
FULL-ON GAIN, PEAK	52 dB	61 dB
OSPL90, HFA	115 dB SPL	-
FULL-ON GAIN, HFA	49 dB	-

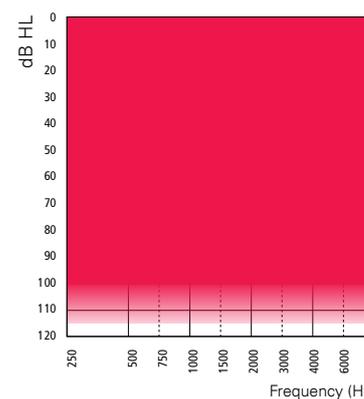
ITC, ITE HS, ITE FS*	2CC COUPLER	EAR SIMULATOR
OSPL90, PEAK	116 dB SPL	126 dB SPL
FULL-ON GAIN, PEAK	50 dB	60 dB
OSPL90, HFA	112 dB SPL	-
FULL-ON GAIN, HFA	47 dB	-

**ITC, ITE HS, ITE FS  
90-SPEAKER**



ITC, ITE HS, ITE FS*	2CC COUPLER	EAR SIMULATOR
OSPL90, PEAK	120 dB SPL	131 dB SPL
FULL-ON GAIN, PEAK	55 dB	65 dB
OSPL90, HFA	116 dB SPL	-
FULL-ON GAIN, HFA	50 dB	-

**ITC, ITE HS, ITE FS  
100-SPEAKER**



ITC, ITE HS, ITE FS*	2CC COUPLER	EAR SIMULATOR
OSPL90, PEAK	125 dB SPL	134 dB SPL
FULL-ON GAIN, PEAK	63 dB	72 dB
OSPL90, HFA	122 dB SPL	-
FULL-ON GAIN, HFA	58 dB	-

\* All technical data refer to Zereña 9 hearing instruments.

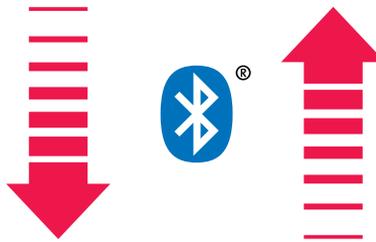
# Direct-to-ear streaming

The Bluetooth® Low Energy protocol supports sound streaming directly to the Zerena hearing instruments.

Activate the iPhone Mic Program to use the iPhone as a remote microphone.

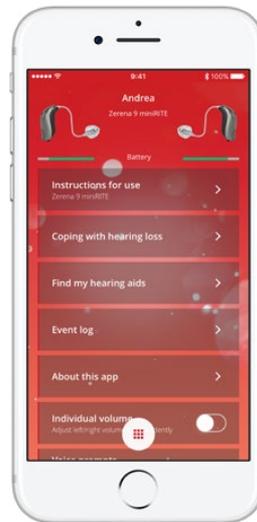


Made for  
Apple iPhone | iPad | iPod



## EasyControl-A

With the app, regulate the volume of the streamed phone and TV signal, change program, mute hearing aids, view battery level, use the "Find my hearing instrument" function, and access internet-connected devices and services.



For information on compatibility, please visit [www.bernafon.com/products/accessories](http://www.bernafon.com/products/accessories).

# SoundClip-A

- Sound streaming to both ears from modern Bluetooth® devices
- Allows hands-free phone calls
- Remote microphone functionality
- Remote control functionality
- 2.4 GHz Bluetooth® wireless technology
- 10 m transmission range to Bluetooth® devices
- 20 m transmission range to hearing instruments



# RC-A remote control

- Volume changes
- Program changes
- Mute function
- 2.4 GHz Bluetooth® wireless technology
- 2x AAAA batteries
- Battery life up to one year with normal use
- 1.8 m (3.3 ft.) transmission range
- Keylock functionality available
- Fast, easy, close proximity pairing



# TV-A adapter

- 2.4 GHz direct streaming to hearing aids
- Dolby Digital Stereo
- 15 m (49.2 ft.) transmission range
- Fast, easy, close proximity pairing
- One-time pairing
- Streaming to an unlimited number of paired Zerena hearing instruments



Fitting software

**OASIS** *next*

# Programming with Oasis<sup>nxt</sup>

The release of Zerena is joined by the release of the new fitting software called Oasis<sup>nxt</sup>. Oasis<sup>nxt</sup> offers a completely new design and new controls but still follows the proven fitting flow from legacy Oasis. Some existing controls have been revised in accordance with updates to current features, while other controls are completely new as a result of the new Bernafon technology. The software is highly intuitive and offers the ability to fine-tune the hearing aids with various programming options.

Connect to Oasis<sup>nxt</sup> with the new wireless FittingLINK 3.0. It makes fitting and fine-tuning appointments more comfortable for the clients without the restriction of cables and/or strings around their neck. It is a USB dongle that can be attached either directly to the computer or using a desk stand. With the FittingLINK 3.0, Oasis<sup>nxt</sup> is connected directly to Zerena hearing instruments without an intermediate device.

The FittingLINK 3.0 USB adapter is backwards compatible with the FittingLINK neck loop. The option to connect using conventional methods with cables and HI-Pro, EXPRESSlink<sup>3</sup>, or NOAHlink is also available.

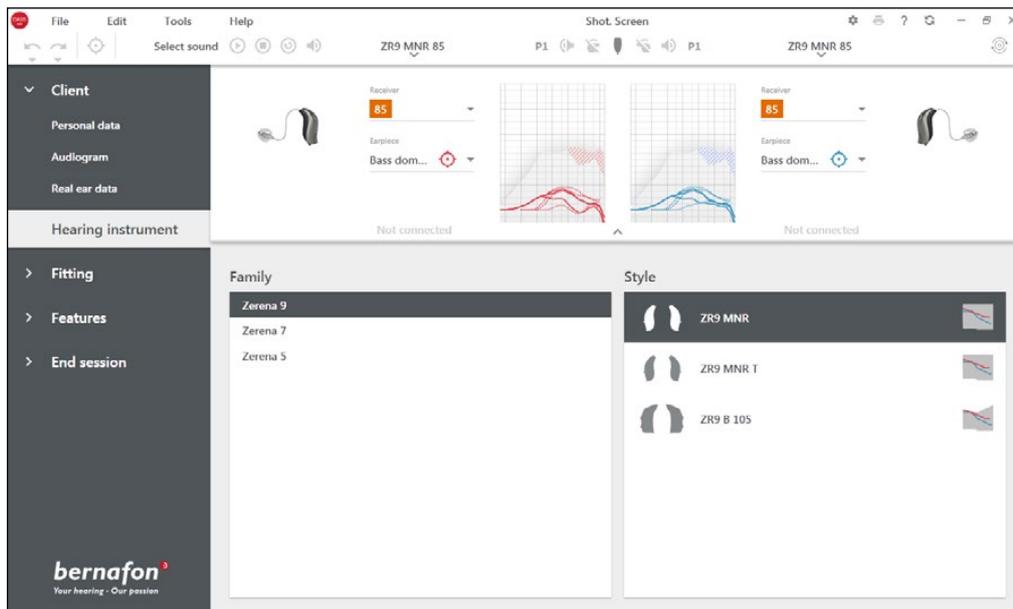


The FittingLink 3.0 USB and the desk stand.

# Selection made easy

The hearing instrument selection screen has a new look. Choose the hearing instrument that is best for your client. The fitting range is clearly displayed and acoustic options are now on the same screen making it easier to see the effect that the acoustics have on the fitting capabilities.

Another option is to simply connect the hearing instruments and let the software recognize them and prescribe the most appropriate acoustics. There are two icons available to click in order to connect the hearing aids. There is one in the tool bar and one at the top of the screen. Choose your preferred programming device by using the Preferences selection in the tool bar.



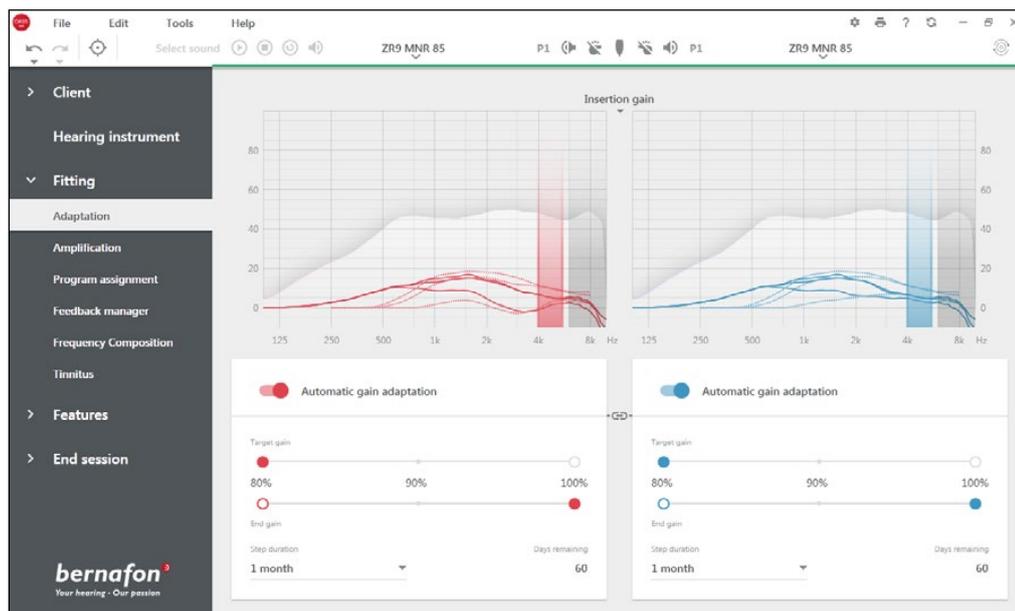
Oasis<sup>next</sup> new Hearing Instrument Selection screen

# Intuitive fitting with Oasis<sup>nxt</sup>

The fitting screens are organized into categories that create an even more efficient fitting process. The navigation bar on the left is familiar but updated. It guides you through the fitting from selection to client information, to first fit, and finally to follow-up fine-tuning.

The new Adaptation Manager gives you further ability to customize the fitting for each individual client. Not everyone is prepared to wear their new hearing aids fully programmed to the prescription targets. Help your client along their journey at their own pace with the Adaptation Manager.

By choosing between three different levels, you can either set the client to full prescription straight away or give them some weeks to gradually increase the gain to their prescribed level.



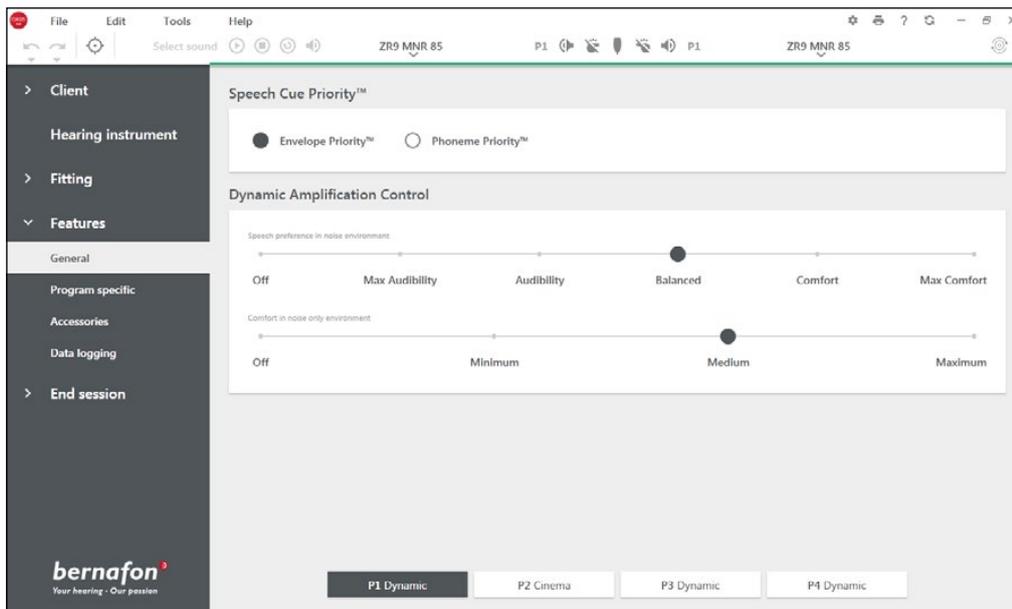
Oasis<sup>nxt</sup> Adaptation Manager screen

# Innovative controls

The new feature Dynamic Amplification Control™ (DAC™) ensures that signal processing constantly applies the correct amount of gain and compression to accommodate active and changing environments. The settings for DAC™ have prescribed defaults for each program but can be adjusted in order to further customize the fitting for each of your clients. Clients have different priorities; therefore, Oasis<sup>next</sup> gives you the freedom to make adjustments that are necessary to fulfill each client's listening preferences.

Use the Preference for speech in noise environment control to adjust the amount of focus that should be applied to speech. Although the system itself will determine the optimized amount of speech based on the environment information, there is still a window within which you can select the client's preferred listening settings. Some clients will want to hear all aspects of speech even if that requires allowing more noise into the signal. Reduce the Preference for speech in noise environment control to make the signal more comfortable for others that place a higher priority on comfort rather than hearing the softest speech sounds.

Furthermore, use the Comfort in noise only environment control to adjust the amount of gain added to the signal. For clients that have specific comfort requirements, this control gives you the ability to further fine-tune the amount of noise experienced in environments where speech is not present.



Oasis<sup>next</sup> Dynamic Amplification Control™ screen



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Established in 1946, Bernafon representatives and employees in over 70 countries have worked ever since in the spirit and tradition of our founders to develop and market solutions that help people with hearing difficulties. With leading technology, high performance products, and outstanding support, we strive to deliver beyond expectations. Our Swiss values, together with technological competence, passion, and true partnerships, help us fulfill our goal:

**Together we empower people to hear and communicate better.**

For more information on Zerena hearing aids, visit our Bernafon website.

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Your hearing · Our passion