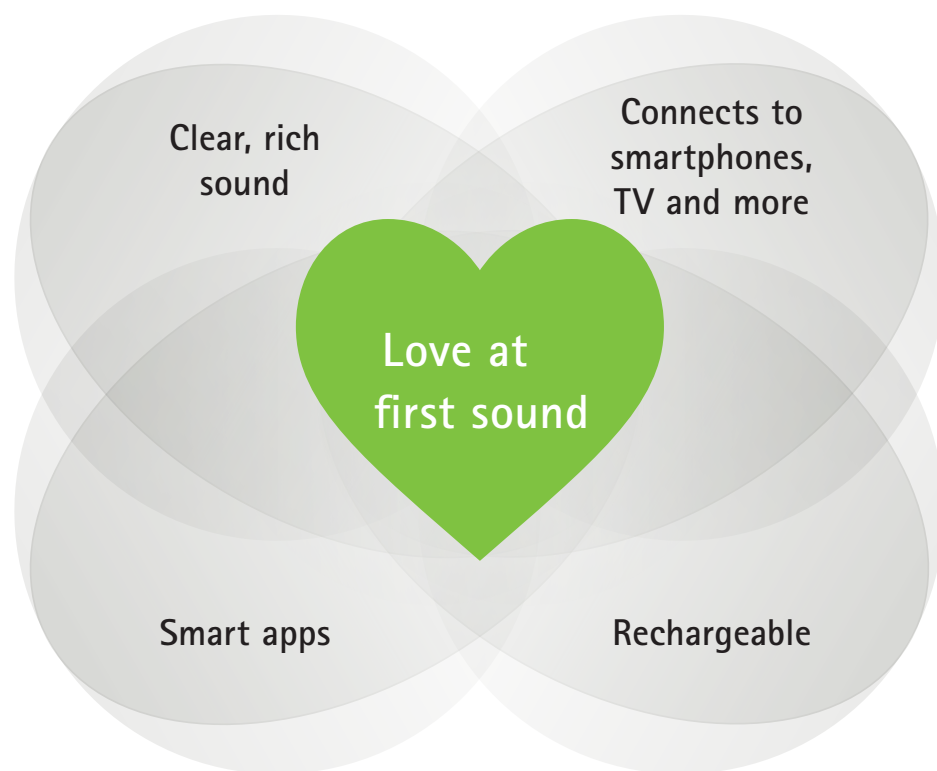


Marvel™ technology by Phonak

Love at first sound

The new Marvel technology platform demonstrates our commitment to improve hearing without limitations. Our guiding principles lie within the importance to develop hearing solutions with unmatched hearing performance, speech understanding and sound quality – regardless of the listening environment. The newest generation of Phonak hearing aids reflects years of extensive research and development. We've listened to hearing care professionals and hearing aid wearers around the world and focused our attention on what they expect from a first-class hearing aid.



With this philosophy, combined with modern technology, we've developed multifunctional hearing aids that deliver a love at first sound experience – each and every day.

Each hearing aid under the Marvel platform is packed with cutting-edge Phonak technologies. The true competitive advantage and uniqueness comes from how these technologies work harmoniously together – all in one instrument.

Key technology highlights of the Marvel platform:

- AutoSense OS™ 3.0
  - Binaural VoiceStream Technology™
  - Bluetooth® connectivity (iOS, Android and any Bluetooth®-enabled phone)
  - AirStream™ technology
  - Lithium-ion rechargeable battery technology
  - Roger™ technology now directly streaming to the hearing aids
- (Available Fall 2019)

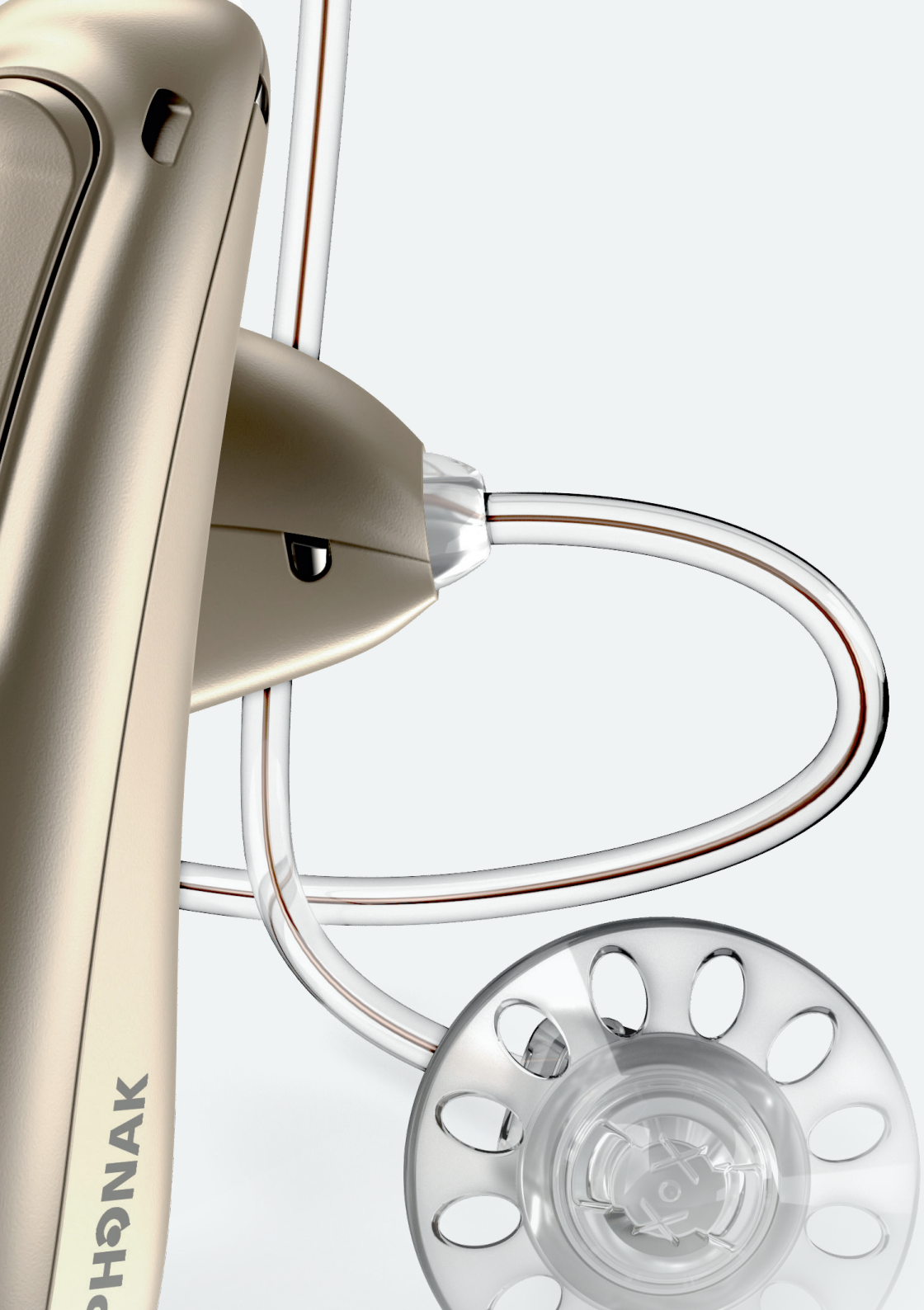
In addition, Phonak is introducing eSolutions, a new suite of smart apps and solutions, designed to seamlessly and securely connect hearing care professionals with their patients. Advancements in remote based services support solutions that offer greater user autonomy and more tailored customer care.

We have dedicated extensive effort to creating a user-friendly experience for you and your patients.

Marvel hearing aids are your ultimate choice for clear, rich sound in various listening situations, while effortlessly connecting patients to the world around them.

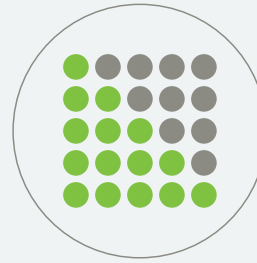






PHONAK

## AutoSense OS™ 3.0 — automatic adaptation to everyday listening situations



With the Marvel technology platform, Phonak introduces AutoSense OS 3.0. New developments to the operating system have been designed to improve hearing performance and deliver a seamless listening experience for your patients.

Through years of continuous development, we have used artificial intelligence for AutoSense OS to learn, detect and precisely match environmental and streamed sounds. As a result, the newest generation of this proprietary Phonak technology recognizes and automatically adapts to more listening situations than ever before.<sup>5</sup> The operating system analyzes acoustic environments and draws upon multiple features within the hearing aid. It then blends them to create over two hundred distinct settings, resulting in optimized sound regardless of the listening environment.

### **Exceptional sound quality from the first fit<sup>1</sup>**

To address important requirements such as sound quality and speech understanding at first fit, the Adaptive Phonak Digital (APD) pre-calculation has been enhanced. Studies confirm that the enhanced pre-calculation in Marvel delivers exceptional first fit acceptance by improving sound quality, while maintaining excellent speech intelligibility in quiet and noise.

### **Reduced listening effort in noise<sup>3,9</sup>**

A further innovation in AutoSense OS 3.0 is the situation-dependent compression. Evidence shows better acceptance for slower compression in noisy environments than with fast compression. A newer study conducted at Hörzentrum Oldenburg showed significantly reduced listening effort for hearing aid wearers with milder hearing loss using slower compression in noise.

### **Top-rated streamed sound quality<sup>4</sup>**

AutoSense OS 3.0 ensures excellent speech understanding and sound quality in complex listening situations. In addition to the classification of environmental sounds picked up by the hearing aids' microphones, Phonak Marvel are the world's first hearing aids to classify streamed speech and streamed music signals. The result is top-rated streamed sound quality<sup>4</sup> while watching TV, videos, listening to music, podcasts, eBooks and more.

**Want to know more about our technology and research?**  
**Read more at [www.phonakpro-us.com/evidence](http://www.phonakpro-us.com/evidence)**

### **Key patient benefits**

- Exceptional sound quality from the first fit<sup>1</sup>
- Reduced listening effort in noise<sup>3,9</sup>
- Top-rated streamed sound quality<sup>4</sup>

### **What's in it for you**

- You're able to precisely tailor your patients' hearing aids for their optimal hearing experience
- Confidence in your patients' hearing aids to appropriately adapt to their environment

### **Unique to Marvel**

- Classification of streamed audio signals for top-rated streamed sound quality<sup>4</sup>

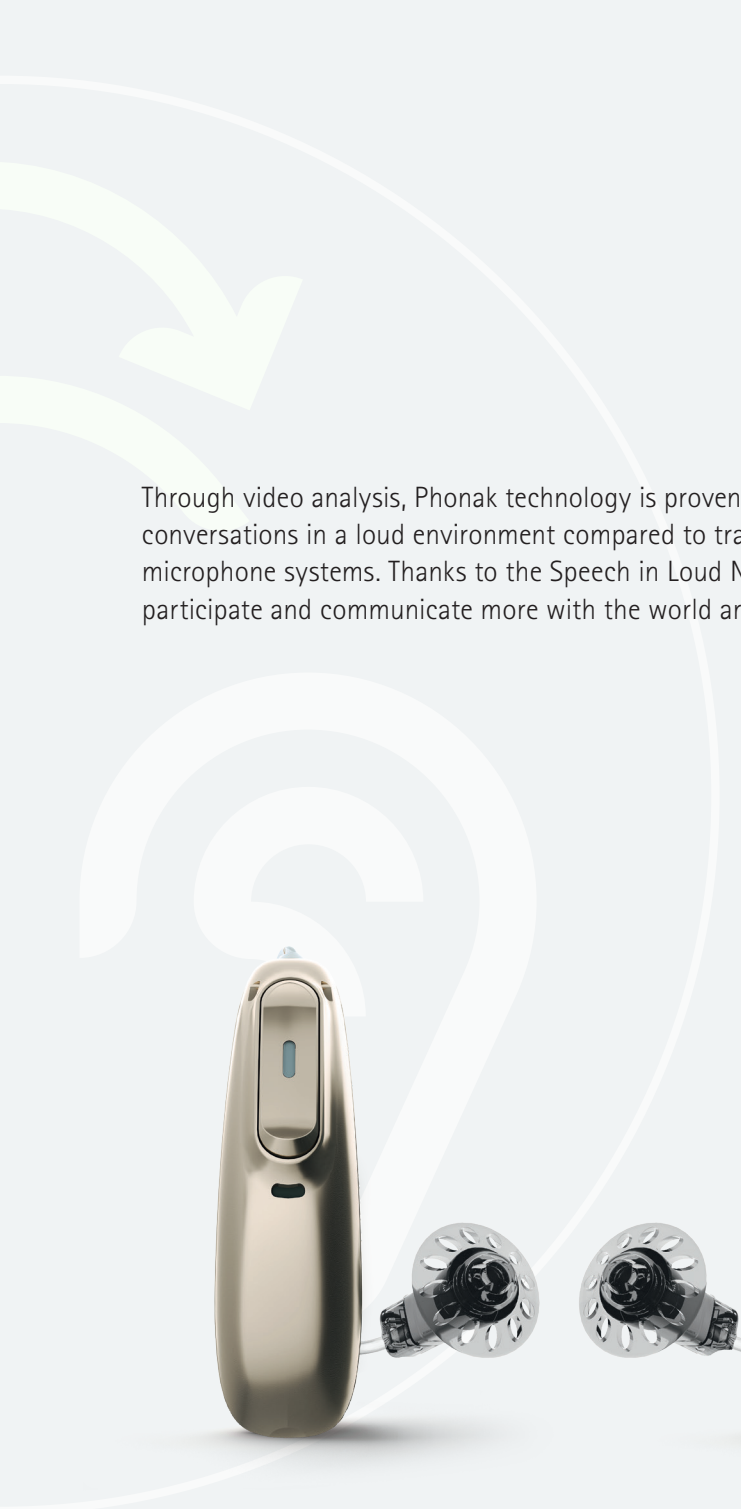
## Binaural VoiceStream Technology™ – because two ears hear better than one



The greater the noise level, the greater the hearing challenge. AutoSense OS 3.0 utilizes Binaural VoiceStream Technology in all Marvel hearing aids to tackle challenging listening situations.

This trademark Phonak technology was developed based on the fact that two ears hear better than one. It streams the full audio bandwidth in real-time and from ear to ear. This linking of the two hearing aids ensures that users benefit from hearing speech in both ears, especially in a noisy environment, on the phone or when they can't face the speaker. Binaural VoiceStream Technology leads to a more narrow beam, while not shutting out the surrounding environment.

Binaural VoiceStream Technology enables programs and features such as Speech in Loud Noise (StereoZoom), Speech in 360° and DuoPhone.



Through video analysis, Phonak technology is proven to simplify group conversations in a loud environment compared to traditional directional microphone systems. Thanks to the Speech in Loud Noise setting, people participate and communicate more with the world around them.<sup>6</sup>



#### Key patient benefits

- Better speech understanding in noise<sup>2</sup>
- Easier to follow and participate in group conversations<sup>6</sup>

#### What's in it for you

- The ability to offer dedicated features and programs to ensure optimal hearing performance in specific listening situations

#### Unique to Marvel

- No more compromise! Phonak proprietary 2.4 GHz chip (SWORD™ 3.0) now provides a protocol for binaural streaming

## Connectivity to smartphones, TV and more — with top-rated streamed sound quality<sup>4</sup>

*It's just like using wireless headphones — except maybe even better, because Marvel hearing aids can distinguish and automatically adjust to streamed speech and music signals.*



### Cell phone connectivity

Unlike any other hearing aid available, Marvel can connect directly to either **iOS** or **Android** smartphones or other **Bluetooth®**-enabled phones to stream any kind of audio binaurally. Marvel offers true hands-free phone calls with built-in microphones. Calls can be answered or rejected with a simple push of a button, even if the phone is across the room. For even more convenience, audible notifications can now be set to be heard through the hearing aids.

Direct connectivity to smartphones also enables your patients to use specifically designed Phonak apps to get the most out of their hearing aids.



### TV and multimedia experience

In addition to universal Bluetooth® connectivity, Phonak proprietary **AirStream™ technology** delivers top-rated streamed sound quality<sup>4</sup> from any TV or stereo system. The Phonak TV Connector, a simple plug and play solution, is capable of broadcasting to multiple listeners up to 15m (50ft) away without a body-worn streaming device. The TV Connector automatically connects to the hearing aids when in range, or can be manually controlled with the new on/off button. It is compatible with Dolby sound input.

### Environmental Balance

Thanks to the Environmental Balance function, your patients can adjust their hearing aids during streaming. They can do this directly with the push button on their hearing aids or by using the volume control on their phone to reach the optimal hearing experience. This innovative feature allows them to adjust the listening focus to the streamed or to the environmental sounds simultaneously.



### Key patient benefits

- Connectivity to cell phones – iOS, Android and Bluetooth®-enabled phones
- Connectivity to a variety of everyday electronics with Bluetooth®
- Hearing aids used like wireless stereo headphones

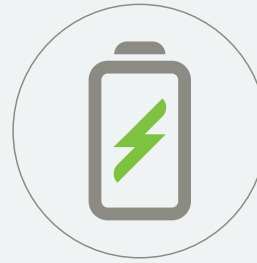
### What's in it for you

- Provide a solution with universal connectivity
- Offer a plug-and-play TV solution with top-rated streamed sound quality<sup>4</sup>

### Unique to Marvel

- The world's only hearing aids that stream any kind of audio directly from any Bluetooth®-enabled device
- Audible smart notifications can be heard directly in Marvel hearing aids from connected devices – phone calls, alerts, email notifications, etc.

## Phonak rechargeable — full day of hearing including streaming



Phonak has pioneered rechargeability in the hearing industry with the introduction of lithium-ion rechargeable batteries. Marvel hearing aids are also available with this technology. They are quick to charge and long lasting. This means no more hassles for your patients with disposable batteries that are small and difficult to handle.

Like other electronics, rechargeable Marvel hearing aids are always ready to go. They switch on automatically when removed from the charger. With a sealed battery compartment, they are more reliable than exchangeable battery solutions.

Rechargeable Marvel hearing aids come with easy-to-use smart charging options, including the new Mini Charger Case with standard USB-C charging outlet and new multicolor indicator lights that improve usability.



### Key patient benefits

- Ease of use — no more hassles with disposable batteries
- Hearing aids turn on out of the charger
- Full day of hearing including streaming
- Super quick charging
- Battery engineered to last 6 years
- IP 68 rating

### What's in it for you

- Expand your reach: research shows that rechargeability is a top reason that would motivate first-time users when choosing a hearing aid<sup>10</sup>
- Engineered for increased reliability; fewer repairs from broken battery doors or dirt/moisture entering the housing
- Have more meaningful discussions and consultations instead of explaining how to change batteries

### Unique to Marvel

- Rechargeable model with lithium-ion, T-coil and 2.4 GHz direct connectivity

## Roger™ technology — to boost hearing aid performance



In situations where loud noise and distance affect the signal-to-noise ratio (SNR), understanding speech can still be particularly challenging. This is where Roger comes in to boost hearing aid performance.

As a break-through in hearing technology, Marvel hearing aids feature RogerDirect™ which allows Roger technology to stream directly to Marvel hearing aids. After a simple installation of the receiver functionality, patients benefit from the proven performance of Roger without attaching an external receiver. This major innovation makes Roger technology easier to use and more attractive for a broader group ranging from mild to profound hearing loss.

Roger technology makes use of intelligent and adaptive algorithms that continuously measure and precisely analyze noise levels to keep the Roger signal clearly audible above the background noise. Moreover, the Roger microphone detects its orientation to optimally process speech and provide best speech understanding.

Roger is the only premium wireless microphone technology with adaptive behavior, MultiBeam Technology and MultiTalker Network. With this solution, you enable your patients to fully participate in group conversations even in very noisy environments such as restaurants, meetings at work and school activities.

**RogerDirect — Available Fall 2019**



### Key patient benefits

- Marvel and Roger, the optimal solution for challenging listening situations
- Designed to improve speech understanding in loud noise and over distance
- Discreet and appealing solutions
- Flexibility to combine multiple microphones to extend the listening range

### What's in it for you

- The complexity and hassle of attaching a receiver is gone
- More Roger compatible form factors allow you to offer an appealing and discreet solution

### Unique to Marvel

- RogerDirect allows Roger microphones to stream directly to Marvel hearing aids without the use of an external receiver

## Phonak eSolutions



*Sonova Technology ePlatform (STeP) is Sonova's cloud-based engine that powers eSolutions. This advanced end-to-end cloud based platform also protects our digital tools, making them secure and easy to use for you and your patients. STeP's open architecture makes it powerful and dynamic as it acts like a hub, able to connect with existing and future business solutions. With this platform, we provide hearing healthcare services by empowering people and connecting them with secure, reliable technology.*



### eSolutions

The future of healthcare services, eHealth, is a rapidly growing segment with huge impact and influence on our industry. This trend within healthcare is driven by different aspects such as cost, user behavior, ever-advancing technological capabilities and new innovations.

eAudiology, grounded in innovative technologies and services, is the future of hearing healthcare. It will change how you fit hearing aids and how you support your patients throughout their hearing journey. Phonak is committed to providing more tailored and patient-centered solutions and services that lead to a modern, intimate and efficient patient relationship.

With Marvel, Phonak introduces a new digital service platform called eSolutions. This new suite of smart apps and solutions has been designed to seamlessly and securely connect hearing care professionals with patients. It creates the ability to provide a wide selection of services that can be remote based as well as solutions that offer greater user autonomy.



### Phonak Hearing Screener

Phonak Hearing Screener is an easy to customize online hearing test. Once customized, hearing test calls-to-action (CTAs) are integrated throughout your website and campaigns that drive users to the screener to create more qualified leads.

Potential hearing aid wearers are often looking for an uncomplicated hearing test without having to consult a hearing care professional. The Phonak Hearing Screener provides a three-minute hearing test that is thoroughly validated and offers good accuracy and high hearing loss prediction. Test results are available immediately and detailed reports support decision-making.

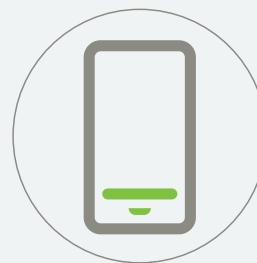
### Key patient benefits

- Encourages taking the first steps toward better hearing
- Provides accurate information about hearing health
- Easy way to reach out for an appointment to visit a hearing care professional
- Base for a more meaningful dialogue

### What's in it for you

- Easy way to offer a convenient online hearing test to potential patients, generating qualified leads
- Provides validated test results from potential patients that are ready to start wearing hearing aids
- Innovative smart apps and solutions to help business growth

## Smart apps — to get the most out of Marvel hearing aids



### myPhonak app

This easy-to-use app, including Phonak Remote Support and Phonak Hearing Diary, allows you to stay connected with your patients, assist them and adjust their hearing aids wherever and whenever needed. This increases patient satisfaction and reduces hearing aid returns.

### **Phonak Remote Support**

Remote Support provides a way for patients to get a virtual appointment and hearing aid adjustment in real-time without having to physically travel to your practice. This greatly increases the convenience for both you and your patients. A personalized experience helps to match individual needs while making real-time adjustments in real-life environments.

### **Phonak Hearing Diary**

Hearing Diary provides hearing aid wearers with a convenient way to share their experiences about their hearing. Your patients can give feedback and share their usage data with you if they choose. A web-based dashboard provides you with an overview of your patients' satisfaction, wearing time, certain issues and datalogging information. This allows you to quickly identify, react and assist your patients to improve overall satisfaction and experience.

### **Key patient benefits**

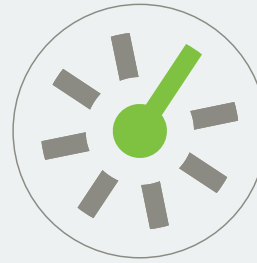
- Convenient real-time support in real-life environments
- Personalized experience
- Confidence and peace of mind, knowing their trusted hearing care professional is taking care of their needs
- Easy way to provide feedback to the hearing care professional about their hearing aids

### **What's in it for you**

- Better fitting success
- Higher patient satisfaction
- Provide you with valuable insights about your patients' real-life experience with hearing aids
- Notifications about changes so you can take action and support your patient
- Higher patient satisfaction due to more accurate feedback and information about their hearing aids

### **Unique to Marvel**

- Real-time remote hearing aid adjustment including video call, fully embedded in Target fitting software



## Phonak Target — simply the world's favorite fitting software<sup>7</sup>

The Phonak Target fitting software is known for its high usability, transparency and stability. Building on a solid foundation, Target 6.0 leverages the new technologies and features of Marvel hearing aids. With Target 6.0 you can feel confident about providing a love at first sound experience — from the moment you start fitting the hearing aids.

### **AutoSense OS 3.0**

The Phonak automatic operating system, AutoSense OS, now in its 3<sup>rd</sup> generation, is smarter than ever before. The new program structure in Phonak Target reflects the unique classification approach of environmental and streamed inputs. While providing full flexibility for the fitting, the structure demonstrates how the entire automatic system works together.

### **Unique wireless fitting workflow**

When fitting Marvel hearing aids with Noahlink Wireless, they are easily identified by pressing the button on the hearing aids to visually highlight it in the list of available devices. This patented fitting software feature<sup>8</sup> supports wireless detection and identification.

*Did you know? 90% of hearing care professionals voted Target as good or even better than any other fitting software<sup>7</sup>*

### **Automatic selection of experience level**

Phonak Target automatically pre-selects the experience level for new fittings – based on existing fitting session information. This benefits new patients with enhanced pre-calculation.

### **Acoustic parameter screen with receiver check**

Phonak Target automatically detects and links the sides together when the acoustic parameters are the same. In addition, specific to the Audéo™ family, Target checks the receiver against what is selected in the fitting software and supports the new M receiver and domes.

### **Phonak Trial™ hearing aids**

Supporting counseling and the fitting process, the new Phonak Trial hearing aids can be quickly set to any performance level in order to suit your recommendations. Having all 4 performance levels in one Trial hearing aid provides you with many options for tailoring hearing solutions at the first appointment, or bridging the gap during repairs.

### **Key patient benefits**

- Improved first-fit experience, tailored to their experience level

### **What's in it for you**

- Seamless and hassle-free fitting experience for you and your patients
- Enhanced fitting workflow to adjust the new AutoSense OS 3.0 precisely to your patients' needs
- Additional service offering with Phonak Trial™

### **Unique to Marvel**

- Easy identification of Marvel devices by pressing the hearing aid button

- 1 Jansen, S. and Woodward, J. (2018). Love at first sound: the new Phonak pre-calculation. Phonak Insight, retrieved from [www.phonakpro.com/evidence](http://www.phonakpro.com/evidence), accessed October 17, 2018.
- 2 Stewart, E., Rakita, L. and Drexler, J. (2019). StereoZoom Part 1: The benefit of wirelessly connected narrow directionality in Phonak hearing aids for speech intelligibility, Phonak Compendium, retrieved from [www.phonakpro.com/evidence](http://www.phonakpro.com/evidence), accessed January 2019.
- 3 Winneke, A., Latzel, M. and Appleton-Huber (2018). Less listening and memory effort in noisy situations with StereoZoom, Phonak Field Study News, retrieved from [www.phonakpro.com/evidence](http://www.phonakpro.com/evidence), accessed October 17, 2018.
- 4 Legarth, S., Latzel, M. and Rodrigues, T. (2018). Media streaming: The sound quality wearers prefer, Phonak Field Study News, retrieved from [www.phonakpro.com/evidence](http://www.phonakpro.com/evidence), accessed October 17, 2018.
- 5 Rodrigues, T. and Liebe, S. (2018). Phonak AutoSense OS™ 3.0. The new and enhanced automatic operating system. Phonak Insight, retrieved from [www.phonakpro.com/evidence](http://www.phonakpro.com/evidence), accessed October 17, 2018.
- 6 Schulte, M., Meis, M., Krüger, M., Latzel M. and Appleton-Huber, J. (2018). Significant increase in the amount of social interaction when using StereoZoom. Phonak Field Study News, retrieved from [www.phonakpro.com/evidence](http://www.phonakpro.com/evidence), accessed September 26, 2018.
- 7 Phonak Global Customer Satisfaction Survey, Market Insight, 2017.
- 8 US 8077891 B2; EP 1701585 B1
- 9 Based on preliminary data. Field Study News in preparation, available March 2019 at [www.phonakpro.com/evidence](http://www.phonakpro.com/evidence)
- 10 Abrams H.B. and Kihm J. An Introduction to MarkeTrak IX: A New Baseline for the Hearing Aid Market. Hearing Review. 2015;22(6):16. Published on May 15, 2015  
<http://www.hearingreview.com/2015/05/introduction-marketrak-ix-new-baseline-hearing-aid-market>

The Bluetooth® word mark is a registered trademark owned by Bluetooth SIG, Inc.

iPhone® is a trademark of Apple, Inc.; registered in the U.S. and other countries.

iOS® is a trademark of Cisco, Inc.

Android™ is a trademark of Google, Inc.





## Life is on

At Phonak, we believe that hearing well is essential to living life to the fullest. For more than 70 years, we have remained true to our mission by developing pioneering hearing solutions that change people's lives to thrive socially and emotionally. Life is on.

[www.phonakpro-us.com](http://www.phonakpro-us.com)