OTICON | **Opn**
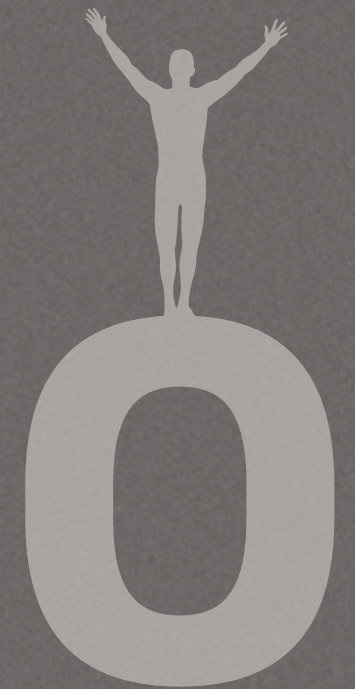
Product Guide

O

oticon
PEOPLE FIRST

Welcome to the Oticon Opn™ product guide

We are proud to introduce Oticon Opn to you. The very first hearing aid to effectively help the user cope with noisy and dynamic environments. By introducing the new ultra-fast Velox™ platform it is possible to be open to all sound sources. Velox uses new ultra-fast noise reduction to ensure that the soundscape can be kept open even in very noisy and dynamic environments and still give the user significant improvement in speech understanding.
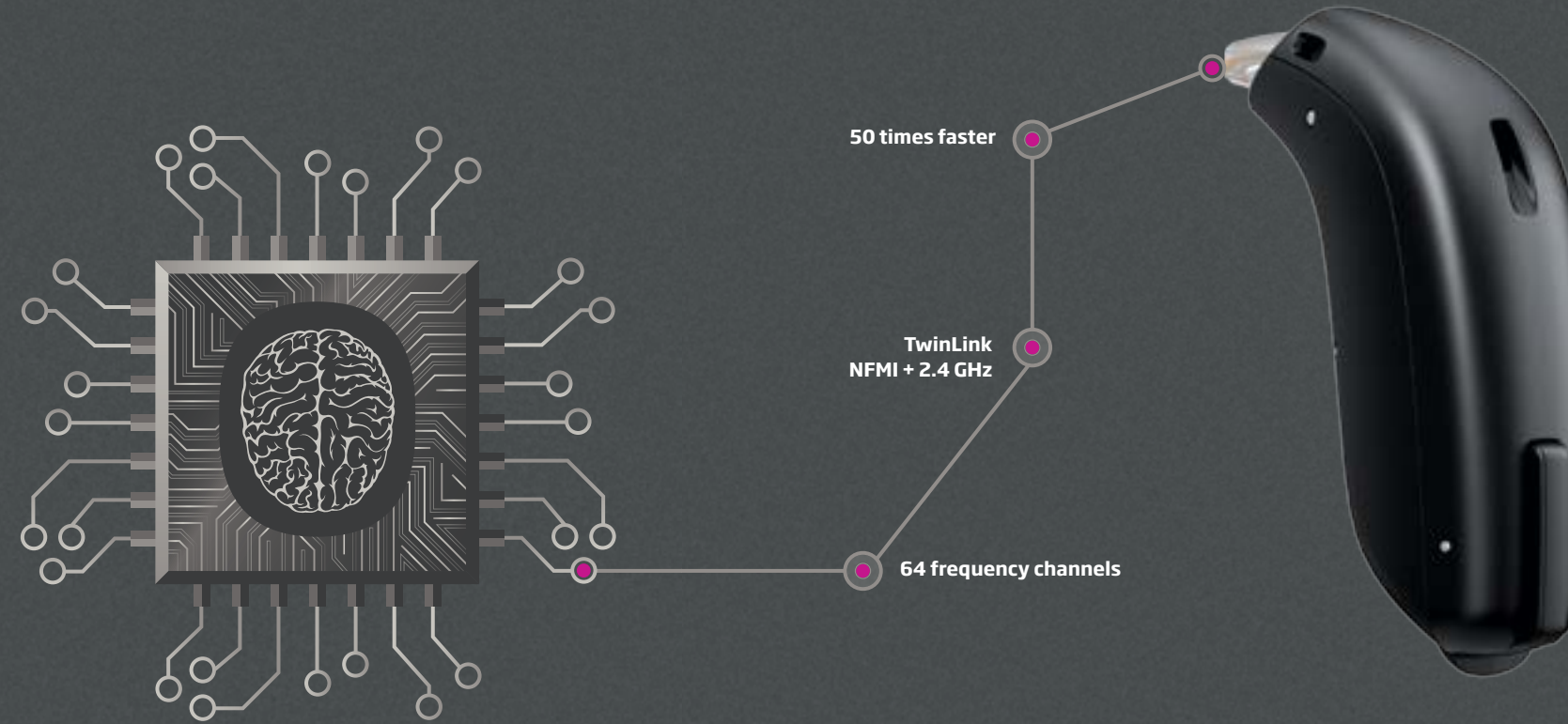
The purpose of this guide is to provide you with all relevant information about the new Oticon Opn hearing aids. You will find descriptions and animations designed to give you a thorough understanding of how amazing new technology and features can empower you to provide the best possible hearing solutions for your clients. You will also find information on connectivity,

Remote Control, App, and other options to help your clients get the most benefit from Oticon Opn hearing aids.

To support you in the fitting process, we have included an overview of how Oticon Genie 2 can help you to provide your client with a successful first fitting that takes personal preferences into account. With support from this guide, we aim to make it easier for you to know and understand how Oticon Opn can help you increase your clients' success and satisfaction with their new hearing solutions.

Please call us if you have any questions or would like more information. We will be happy to help.

Your Oticon team

50 times faster

**TwinLink
NFMI + 2.4 GHz**

64 frequency channels

Contents

INTERACTIVE PRODUCT GUIDE
This product guide is also available in a digital version with animations and interactive links. You can access the digital version at www.oticon.global.

Introducing

Open up to the world

Oticon Opn™ – the very first hearing aid
to effectively help users cope with noisy
and dynamic environments

Oticon Opn introduces groundbreaking
technology that is fast enough to support
the brain and precise enough to monitor the
soundscape and differentiate between sounds.

With the extreme speed of this new technology
users are provided with more accurate
information about the soundscape, and enabled
to more easily locate and separate sound
sources, i.e. they can maintain access to the
sounds of their life so they can focus on what
they find important.

The result is a significant improvement in
the ability to understand speech in complex
environments while, at the same time,
preserving mental energy – ultimately
empowering users to **Open up to the world.**

20%
Less listening effort – reducing the load on the
brain in noisy environments*

20%
More capacity to remember - freeing up mental
resources, enabling the user to recall more in
noisy environments**

30%
Better speech understanding – even in the
most noisy environments, without suppressing
surrounding sounds through narrow
directionality*

*Compared to Alta2 Pro
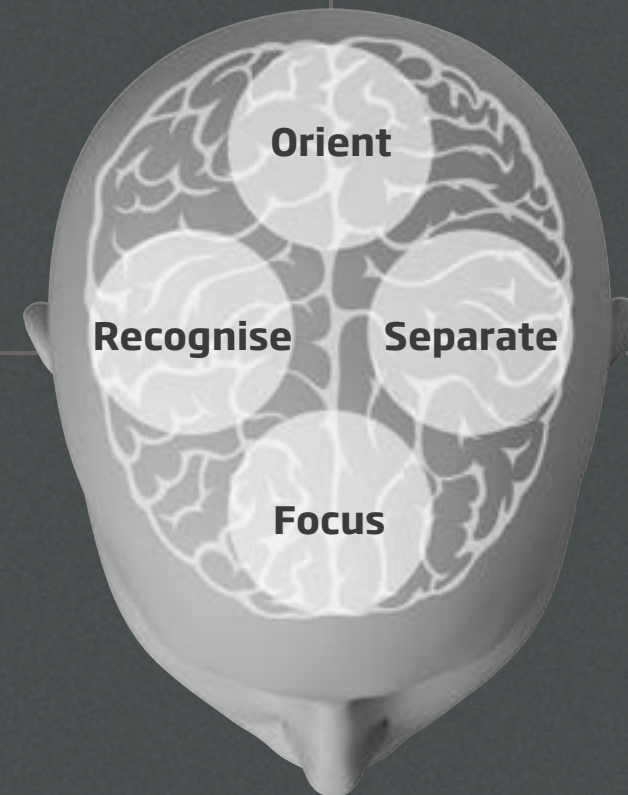**Individual benefit may vary depending on prescription

Proven to make it easier on the brain

**Hearing is a cognitive process
– it happens in the brain.**

Hearing loss limits the amount of acoustic detail the brain receives. The fewer details the harder the brain has to work to decode sound. Oticon delivers better hearing with less effort by supporting the way the brain makes sense of sound. We call this approach BrainHearing.

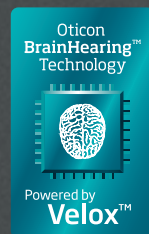Learn more at www.oticon.global

With access to sounds and detailed spatial information available, the brain can naturally orient itself in the sound environment

Orient

Recognise   **Separate**

Focus

Rebalancing the sounds makes them distinct and easier to recognise. This frees up capacity in the brain to store and recall information

The enhanced contrast between the elements of the open sound experience helps the brain separate relevant sounds from competing noise

With constant access to all sounds, even in complex environments, the brain can choose where to focus and re-focus

Oticon
BrainHearing™
Technology

Powered by
Velox™

Oticon Opn™
Groundbreaking technologies create the open sound experience

Promising to provide better speech understanding in noise, the biggest challenge for people with hearing loss, demands revolutionary new technologies and features.

Velox™
The new ultra-fast Velox platform brings market-leading resolution with 64 frequency channels. The high speed platform analyses the environment more than 100 times per second and handles more than 500 million instructions per second.

OpenSound Navigator™
A revolutionary feature that balances sound and noise sources to provide 30% better understanding of speech in noise.

OpenSound Navigator™

Spatial Sound™ LX
Binaural processing fast enough to work with the brain, enables Spatial Sound LX to improve sound location and provide more accurate spatial awareness.

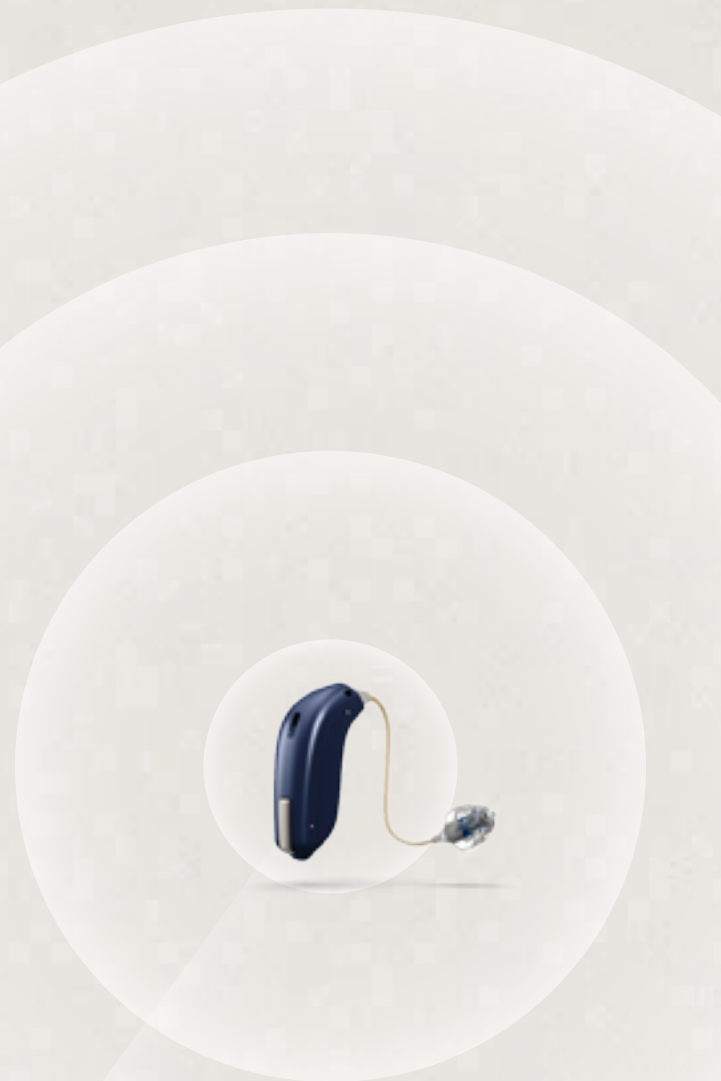**Introducing the world's first TwinLink™ technology**
Built on the Velox platform, Oticon Opn offers two dedicated radios – TwinLink technology. TwinLink combines optimal binaural communication with direct streaming to external devices without compromising instrument size and battery consumption.

Connect to your world
Oticon Opn provides streamer free wireless connection to digital devices used in everyday life. As the world's first hearing aid with the ability to connect to the internet, Oticon Opn can notify users e.g. when the home alarm system is turned on and off and much more.
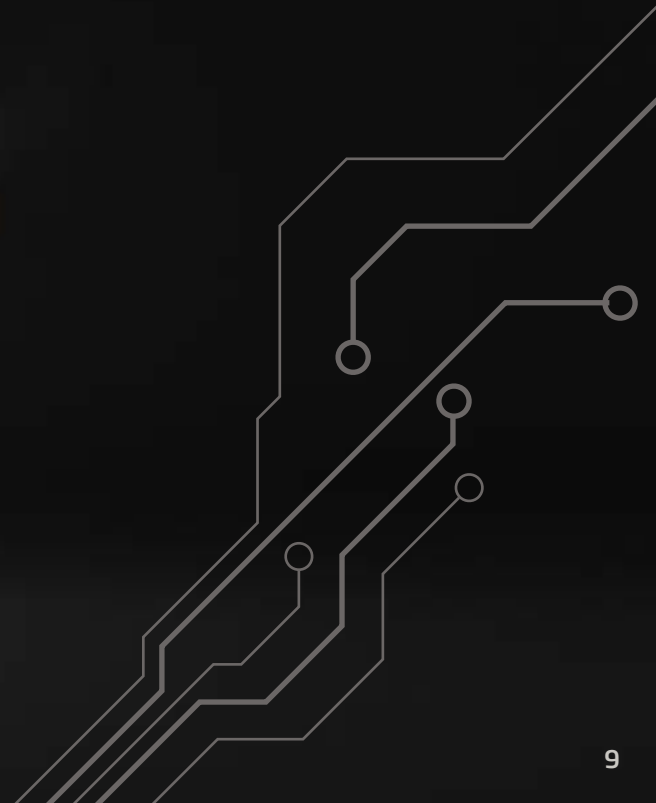
New small, discreet miniRITE
Oticon Opn is available in a compact, newly designed miniRITE that sits discreetly on the ear. Oticon Opn offers a wealth of new features and functionalities all incorporated in a sleek and modern 312 battery-based design.

Made for
iPod iPhone iPad

Technology
& Features

Inside Oticon Opn

High resolution and advanced digital signal processing for a clear and balanced sound picture

The Velox platform represents a completely new signal processing strategy that takes Oticon BrainHearing technologies and user benefits to the next level. We introduce new functionalities and improved performance in each area of modern hearing care technology:

Calibrate & adapt: More precise calibration of the hearing aid to optimise for placement on the head and improving our ability to handle the wide level dynamics of listening environments.

Analyse & balance: Introducing a completely new solution for the number one problem experienced by people with hearing loss, improving on the ability to understand speech in noisy environments.

Amplify & compress: Amplifying and compressing sounds so they become audible, comfortable and at the same time preserve the acoustic details.

Handle feedback: Prevent feedback from occurring and maximising the amount of amplification possible.

Connect & communicate: New wireless technologies to provide a direct interface to digital devices with improved sound quality.

2.4 GHz

NFMI

Calibrate & adapt — 64 — Analyse & balance — 16 — Amplify & compress — 64

64

Handle feedback

Calibrate & adapt:
- Extended input range, Clear Dynamics allows a full range of dynamic input to enter the system.
- Each input path has its own 64-channel filter bank. The filters in linear phase keep the interaural time differences from all four microphones intact.
- 24 bit A/D converters.
- Input calibration precisely compensates for head acoustics and preserves sound quality.

Analyse & balance:
- OpenSound Navigator analyses the environment, balances sounds and noises and cleans the signal from each microphone before the signal is amplified and compressed.
- YouMatic matches instrument settings to user preferences.
- Wind Noise Management removes annoying wind noise, even between words.

Amplify & compress:
- Speech Guard LX, VAC+, Soft Speech Booster LX determine gain and compression.
- Spatial Sound LX uses binaural processing to keep spatial cues from interaural level differences intact for more natural sound orientation.
- Transient Noise Management ensures that the signal is not too loud for the system or for the user.

Handle feedback:
- Feedback shield LX is a sub-system to counteract the acoustical feedback from receiver to microphone to prevent whistling from occurring. Feedback is handled independently for each of the two microphones.

1,200 MOPS

24 bit DSP

11 DSP Cores

High processing power

64

frequency channels

Analysing more than

100 times/second

113 dB SPL

upper limit input range

Introducing the Velox™ platform
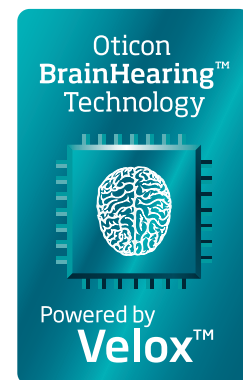
The best in resolution and speed
The groundbreaking Velox platform enables a paradigm shift.

Eleven-core processor, 8 cores for processing sound signals and 3 cores for managing wireless communication, give the instrument extremely fast processing capabilities. The high speed Network on Chip (NoC) architecture with finer engraving (65 nM) in 9 layers delivers impressive performance with the capacity to execute 500 million instructions per second (MIPS) and 1,200 million operations per second (MOPS). It all runs at a maximum of 3.3 mA, when all processes and streaming capabilities are in use. With the Velox platform, a tiny instrument powered by a 1.4V battery can deliver 50 times more processing power than the previous generation.

The digital signal processing uses 24 bit block-floating point representation across 64 frequency channels for higher signal and frequency resolution, fundamental to providing superior sound fidelity.

The Velox platform offers extended linear processing of sounds levels to an upper input limit of 113 dB SPL thanks to 24 bit A/D converters on each microphone and the auxiliary input.

Fully programmable with updatable firmware, the Velox platform is ready for the future.

Oticon
BrainHearing™
Technology

Powered by
Velox™

TwinLink™

Wireless connectivity and binaural processing in a small, energy-efficient solution
New TwinLink technology uses two dedicated radio systems to meet distinct communication needs.

TwinLink technology supports seamless, energy-efficient communication between two hearing aids and streamer free connectivity with external electronic and digital devices.

Near-Field Magnetic Induction (NFMI) enables a continuous exchange of data and audio between two hearing aids to provide advanced binaural processing. This communication is done at minimal power consumption.

With new NFMI, data and audio information is exchanged 21 times per second between the two hearing aids, 4 times more compared to previous generations.

Stereo Bluetooth low energy (BLE) 2.4 GHz connects Oticon Opn directly to smartphones and other digital devices for easy, seamless wireless connectivity. This technology also allows for true wireless fitting.

TwinLink
NFMI + 2.4 GHz

OpenSound Navigator™

OpenSound Navigator™

Less stress. Remember more. Better hearing
OpenSound Navigator takes a pioneering approach to help people with hearing loss navigate in complex and dynamic environments.

Conventional hearing technology oversimplifies the problem of navigating in complex environments. It uses independent, slow directionality and noise reduction to create a narrow focus solely on speech from the front and attenuate all other speakers.
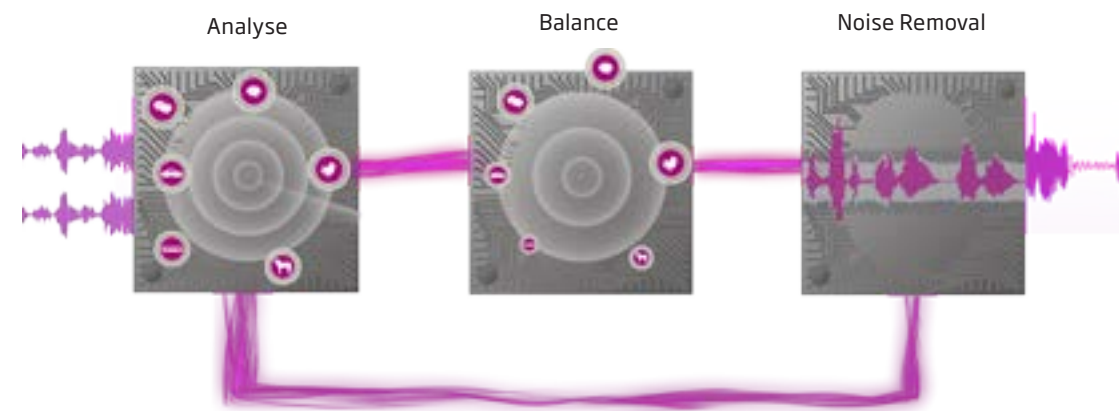
OpenSound Navigator is a new integrated speech-enhancement algorithm that preserves speech and reduces noise in complex environments. This is enabled by the new revolutionary Multiple Speaker Access Technology (MSAT), which ensures access to all speakers in a dynamic environment.

OpenSound Navigator employs an extremely fast three-step process;
- The user's 360° environment is analysed more than 100 times per second to identify the level, position and frequency of every sound.
- The levels of individual sounds are balanced according to personal preferences so that the sound in focus is clear and other sounds are accessible but not distracting.
- Noise, including remaining noise between words, is attenuated rapidly and effectively.

OpenSound Navigator ensures a full, more balanced soundscape and lets users enjoy improved speech understanding even in complex and dynamic environments, while at the same time preserving mental energy.

OpenSound Navigator is personalised in Genie 2 and can be further fine-tuned in YouMatic LX controls.

Analyse   Balance   Noise Removal

Spatial Sound™ LX

Locate, follow and shift focus to the speakers you want to hear
Spatial Sound LX combines a number of advanced technologies to provide a more precise spatial awareness to help users identify where sound is coming from.

Using the energy efficient and fast binaural communication offered by NFMI, Spatial Sound LX preserves interaural level differences in four frequency bands. This maintains the sense of location and direction naturally provided by the head shadow effect.

The multi-band analysis prevents low frequencies from masking higher frequencies. This ensures that interaural differences are preserved over the entire frequency spectrum.

As part of Spatial Sound LX, Spatial Noise Management emphasises sounds on the better ear in asymmetrical noise situations.
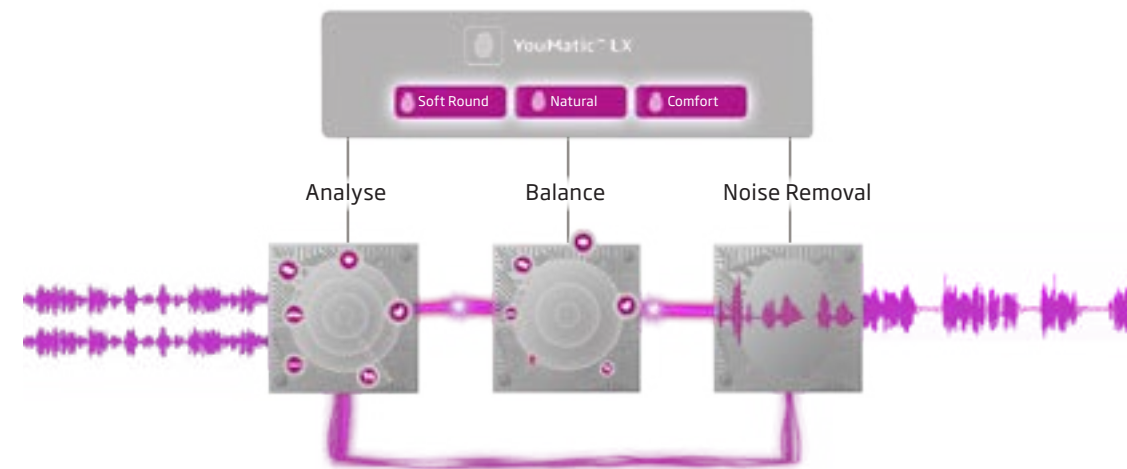
Head shadow effect

Tailors OpenSound Navigator to individual needs and preferences
YouMatic LX is the personalisation feature in Oticon Opn that intelligently controls the level of performance and response of the OpenSound Navigator across listening environments.

YouMatic LX ensures that the OpenSound Navigator delivers the optimised open sound experience to individual users, and at the same time, provides the best possible speech understanding in difficult, noisy situations.

YouMatic LX is automatically configured during the fitting process based on the users' personal sound and listening preferences.

The YouMatic LX control is an integral part of the OpenSound Navigator screen in Genie 2 and enables you to fine-tune the OpenSound Navigator response to serve individual needs.
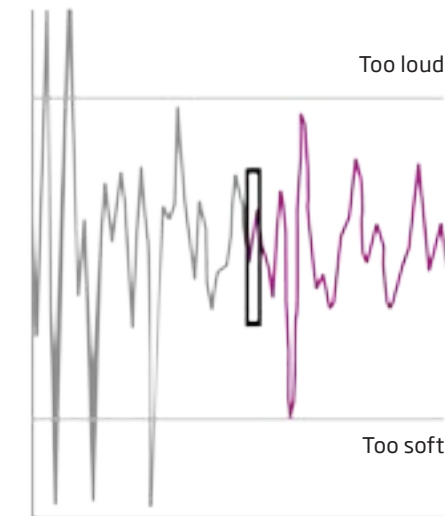
Improves speech understanding in noisy environments
Speech Guard LX preserves clear, transparent sound quality and speech details for better speech understanding with less effort even in complex environments.

Speech Guard LX uses adaptive compression and is the only amplification technology that combines the benefit of linear amplification and fast compression. Linear amplification is applied in a 12dB dynamic range window to preserve amplitude modulation cues in speech signals.

When large changes in level occur, Speech Guard LX quickly adapts gain to maintain audibility and fits all sound in the reduced dynamic range of hearing-impaired listeners.

Speech Guard LX takes advantage of the new extended dynamic input range provided by Clear Dynamics to preserve the clear, transparent quality of loud sounds.

DID YOU KNOW?
Research shows that people have different preferences for how much the hearing aid should help in complex situations.

Personalisation is an integral part of client-centred care. Client-centred care increases satisfaction, adherence to treatment and the feeling of being in control.

YouMatic™ LX

Soft Round   Natural   Comfort

Analyse   Balance   Noise Removal

Too loud

Too soft

DID YOU KNOW?
The benefits of the adaptive compression in Speech Guard LX have been documented in a number of studies. Amongst those, a study by Pitmann et al. (2014) where Speech Guard LX proved superior to fast and slow compression strategies.
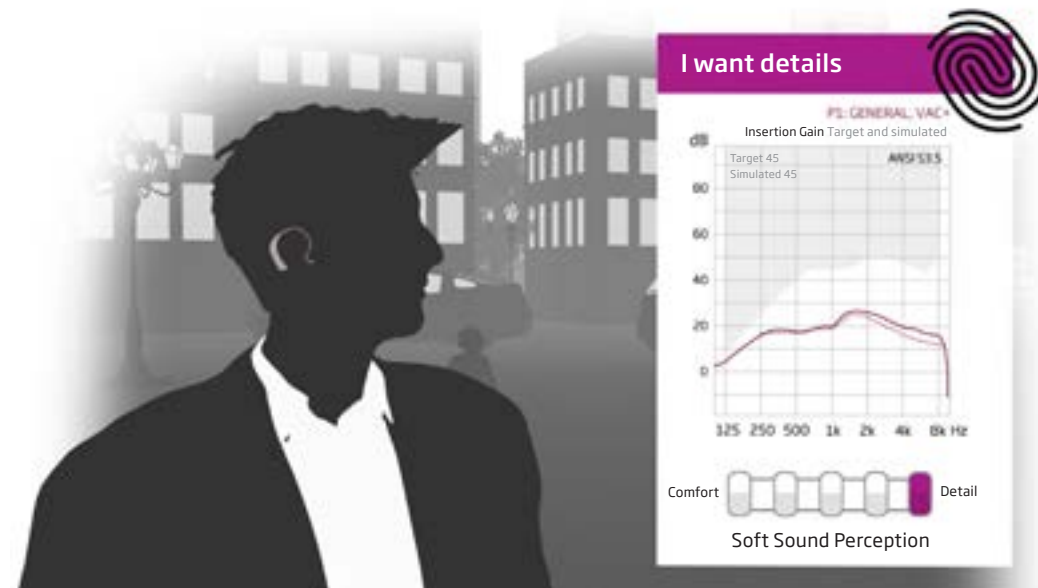
Soft Speech Booster LX

Improves soft speech understanding up to 20%
Soft Speech Booster LX makes soft sounds audible to people with hearing loss. By increasing access to the soft sounds that occur in most situations and conversations, Soft Speech Booster LX improves soft speech understanding by up to 20%.

Oticon's proprietary fitting rationale, VAC+, uses multiple kneepoints to provide a clear focus on soft to moderate speech information while preserving comfortable perception of louder sounds.

Soft Speech Booster LX can be personalised using questions and sound files in Genie 2 to ensure a fitting matched to each user's unique perception of soft sound for the best possible balance between details and comfort.

DID YOU KNOW?
More than 75% of normal speech has soft sounds.

Oticon has developed an app that shows just how much soft speech information is present in normal speech. Find the Soft Speech Booster-app in App Store.

I want details

P1: GENERAL, VAC+
Insertion Gain Target and simulated
Target 45
Simulated 45
ANSI 53.5
125 250 500 1k 2k 4k 8k Hz
Comfort — Detail
Soft Sound Perception

Clear Dynamics

Better sound quality in the full dynamic range of life
Clear Dynamics expands the input dynamic range, processing input sounds up to 113 dB SPL, to provide better sound quality without distortion and artefacts at loud input levels, while still keeping the sound quality of soft input levels intact. Clear Dynamics has an operating range from 5 to 113 dB SPL.

With speech cues preserved at high input levels, users enjoy a better listening experience without distortion even in loud environments. Clear Dynamics is especially valuable for users when listening to music or in conversations in busy, dynamic environments, where peaks can often be louder than the available input dynamic range.

Loud input   Without Clear Dynamics   Clear Dynamics

DID YOU KNOW?
Peaks of speech are usually around 12 dB above and 18 dB below the average speech level. In contrast, music is much more dynamic with peaks of up to 30 dB.

Total Harmonic Distortion (THD) is a measure of the distortion within the hearing aid. Clear Dynamics ensures less than 5% distortion up to 113 dB SPL.

Wind Noise Management

Better access to speech in situations with wind noise
With the powerful Velox platform, Wind Noise Management offers innovative and highly efficient wind noise suppression. High speed estimators analyse the presence of wind noise 500 times per second in 16 frequency channels for fast and precise application of up to 30 dB wind noise reduction. Wind Noise Management attenuates wind bursts in less than 50ms, making it fast enough to precisely attenuate wind between words.

The purpose of Wind Noise Management is to attenuate the wind noise and quickly ensure a stable and comfortable loudness level for the hearing aid user, so they can focus on the speech that's important to them.

When speech is present, the signal-to-noise ratio is preserved because wind noise is suppressed when it is louder than speech. When no speech is present, the system will aggressively suppress wind noise to ensure comfort in windy situations.

DID YOU KNOW?
Wind fluctuates and is highly modulated, and may result in a very harsh and uncomfortable sound in hearing aids. As a result, many users reject using hearing aids even at moderate wind speed.

Wind Noise Management also suppresses the noise created when brushing against the hearing aid.

Wind Noise Management off   Wind Noise Management on

Feedback shield LX

Dual-microphone feedback system eliminates feedback rapidly and effectively
Feedback is uncomfortable and annoying. With Feedback shield LX, Oticon Opn delivers ultra-fast and effective feedback management without compromising audibility or sound quality.

In order to improve efficiency and accuracy Feedback shield LX operates in two separate paths – one for each microphone. In each path three distinct technologies work together to instantly suppress potential feedback. It features a permanent 10 Hz frequency shift, optimised phase inversion, and gain control in 24 frequency channels.

The frequency shift implemented above 1,600 Hz ensures the most accurate estimate of the feedback path. This effective strategy for de-correlating input from output allows higher precision in phase inversion. Phase inversion is applied to the optimised signal to deliver an intact signal free of feedback.

In situations where the risk of feedback rises dramatically, e.g. a tight hug or a big yawn, it may be necessary to strategically reduce gain at a rapid rate of 40 dB/s. Gain is rapidly restored once the feedback risk is gone.

Feedback shield LX allows more gain to be added before any intervention is necessary and this allows for higher flexibility in the fitting process.
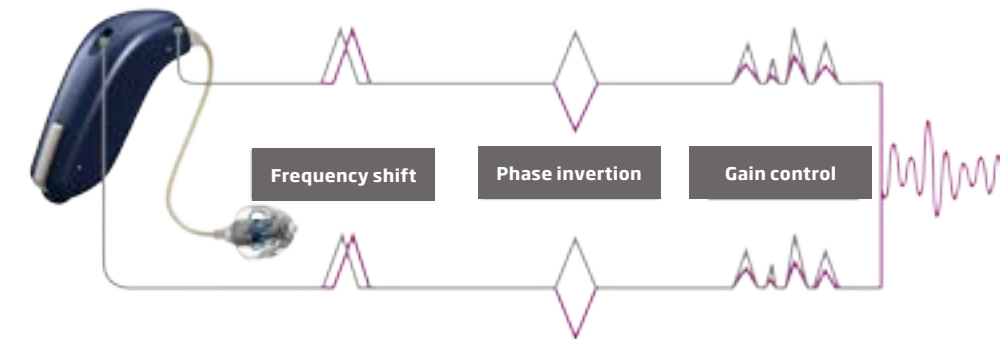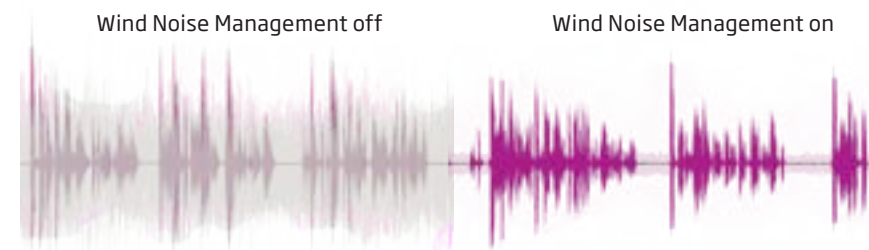
Frequency shift   Phase invertion   Gain control

DID YOU KNOW?
There are two types of consequences of feedback. The audible feedback materialises as a whistling sound, while the inaudible feedback affects sound quality and occurs when the hearing aid is operating close to the feedback margin.

Feedback shield LX prevents both audible and inaudible feedback.

Feature overview

Acoustic notifications	Provides notifications and warnings to assist and support confidence in daily use, e.g., start-up jingle, low battery warnings, etc.	
Adaptation Management	Adapts in 3 steps for gradual user acclimatisation to a new hearing aid	
App & Remote Control	Discreetly adjusts volume, switches between programs or controls connectivity sources with Remote Control or the Oticon ON App	Page 30 Page 31
AutoPhone	Automatically activates a phone program in the hearing aid for telephones with a dedicated magnet	
Bass Boost	Controls compensation for bass leakage in open fittings when streaming audio	
Binaural Coordination	Coordinates program and volume settings between the two hearing aids	
Binaural processing	Continuous data exchange between two hearing aids about the sound level in each ear to maintain the difference in input between the ears	
Clear Dynamics	Expands the dynamic input range, processing sounds up to 113dB SPL, to preserve sound quality even at loud input levels	Page 19
Data Logging	Logs volume control usage, program usage and total use time	
Feedback Analyser	Analyses the risk of feedback with the prescribed gain and chosen acoustics in Genie 2	Page 37
Feedback shield LX	Employs an ultra-fast and effective feedback management system that prevents feedback without compromising sound quality or audibility	Page 21
Fitting Bands	16 fitting bands for a precise fit and more fine-tuning options for client fittings	
Fitting formulas	Include VAC+, NAL-NL1, NAL-NL2	
Made for iPhone®	Indicates compatibility. 'Made for iPhone' means that the hearing aid and accessories have been designed to connect to iPhone models, and have been certified by the developer to meet Apple performance standards.	Page 30
Multiple Directionality Options	Enables conventional directionality settings in addition to OpenSound Navigator transition settings	

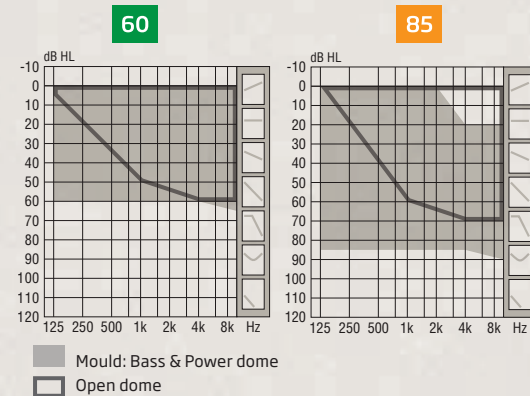|		
NFMI	Near-Field Magnetic Induction – Improves speed of communication and bandwidth between two hearing aids with very low power consumption	Page 13
OpenSound Navigator	Provides listening support by continuously analysing the environment, balancing sound sources so focus sound is clear and competing sounds are not too disturbing. Finally, it attenuates remaining noise to provide a more accessible sound environment.	Page 14
Phone Program	Optimises hearing aid for telephone conversations using the hearing aid microphone and/or Telecoil	
Processing Channels	Data is analysed and processed in 64 channels, 100 times per second	Page 12
Soft Speech Booster LX	Applies an individual amount of soft gain to increase soft speech understanding	Page 18
Spatial Noise Management	Optimises listening in asymmetrical, noisy situations	
Spatial Sound LX	Uses binaural compression to provide precise spatial awareness that helps users identify where sounds are coming from	Page 15
Speech Guard LX	Preserves the dynamics of speech by combining the benefits of linear and non-linear compression	Page 17
Stereo streaming	Streams audio input in stereo	Page 30
Transient Noise Management	Protects against sudden loud sounds with fast recovery to preserve audibility; offers four different levels for fine tuning, including 'off'	
TV Adapter	Delivers an undisturbed signal directly to the hearing aids when watching TV	Page 31
TwinLink	Combines two distinct radio technologies in an innovative wireless communication system; features one technology to support seamless, energy-efficient binaural communication between two hearing aids (NFMI) and one to support communication with external electronic and digital devices (2.4 GHz)	Page 13
Wind Noise Management	Protects against the discomfort of wind noise	Page 20
YouMatic LX	Accommodates personal listening preferences and sound perceptions in the prescription of gain and automatics	Page 16

Instruments

Mould: Bass & Power dome
Open dome

OSPL90 (peak)		OSPL90 (peak)	
Ear simulator	116 dB SPL	Ear simulator	127 dB SPL
2cc coupler	105 dB SPL	2cc coupler	116 dB SPL

Full-on gain (peak)		Full-on gain (peak)	
Ear simulator	46 dB	Ear simulator	66 dB
2cc coupler	35 dB	2cc coupler	54 dB

Battery size	312
Battery life (h)*	60-65/55-65
Wireless	•
Directional	•
Program control	•
Volume control	•
Made for iPhone	•
TV Adapter 3.0	•
Remote Control	•
AutoPhone	•
Wireless fitting	FittingLINK
Cable fitting	FlexConnect and Cable #3

* Real usage battery life is shown as an estimated interval based on mixed use cases with variable amplification settings and variable input levels, incl. direct stereo streaming from a TV (25% of the time) and streaming from a mobile phone (6% of the time)

New small, discreet miniRITE

Oticon Opn miniRITE has a new, discreet design with a smart single push button for easy operation of volume and programs.
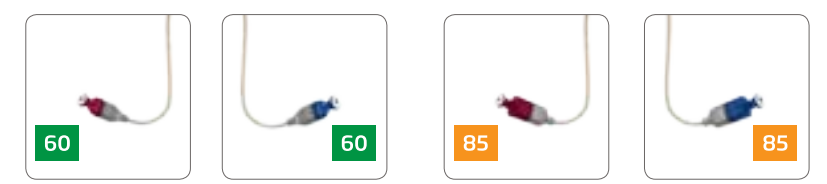
Oticon Opn miniRITE offers clients a discreet hearing aid with a wealth of new features and functionalities incl. 2.4 GHz wireless technology and Made for iPhone® functionality.

Oticon Opn uses the proven miniFit receivers and ear pieces, fits up to 85 dB HL and is powered by a 312 battery.

miniFit receivers
Select between two receiver types with different output performance, with lengths 0-5

60 60 85 85

Accessories for miniFit receivers:
- Different ear grips for receiver 60 and 85
- Use ProWax miniFit filter
- Measuring tool

IP68 – water and dust resistant
Proven IP68 water resistant hearing aids

Oticon hearing aids are designed to be worn in all everyday activities. All vital components are nano-coated inside and out. Oticon Opn is robust and reliable, and has a certified rating of IP68 for dust and water resistance. Therefore users do not have to worry about sweat or getting wet in the rain. The hearing aids are not intended to be worn while showering or participating in water activities.

Standard ear pieces

miniFit domes		5 mm[1]	6 mm	8 mm	10 mm	12 mm
Open dome		•	•	•	•	
Bass dome, single vent (0.8 mm)			•	•	•	•
Bass dome, double vent (1.4 mm)			•	•	•	•
Power dome			•	•	•	•

All domes:
- Are made of silicone
- Are only compatible with miniFit receivers
- Have built-in wax protection

Grip Tip

		No vent	Vent
Select between two different Grip Tip types, in two different sizes (small & large) for both left and right ear.			

Grip Tip:
- Is tinted pink
- Is more durable than domes
- Has a tacky texture to help prevent slippage

Customised ear pieces[2]

60 85

		60	85
Micro mould[3]		•	•
LiteTip[3]		•	•
Micro mould, VarioTherm®		•	•
LiteTip, VarioTherm®		•	•

Micro mould and LiteTip:
- Are made of acrylic

VarioTherm:
- Are thermoplastic
- Remains hard at room temperature for easy insertion
- Softens at body temperature for increased comfort and optimum sealing
- Available in two hardnesses – 50 and 70. 70 is standard.

Please note:
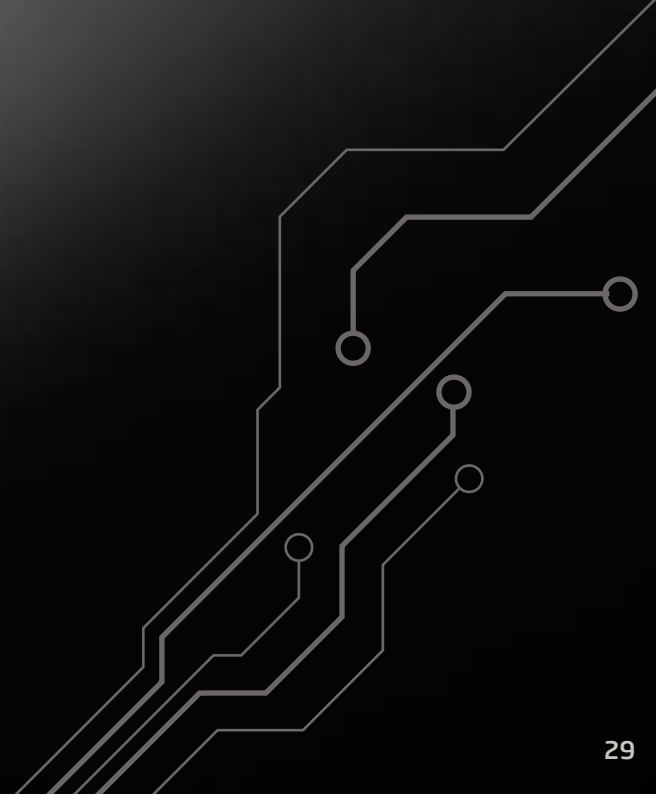VarioTherm requires gentle warming of the mould with a hair dryer before insertion or removal of the receiver.

C068 Royal Blue
C090 Chroma Beige
C094 Terracotta
C093 Chestnut Brown
C063 Diamond Black
C092 Steel Grey
C091 Silver Grey
C044 Silver

1) Only for receiver 60. 2) Requires taking an ear impression. 3) Uses ProWax filter

**Connectivity
& Apps**

Made for iPhone

Oticon Opn is a Made for iPhone hearing aid. Directly connected to iPhone, the hearing aid doubles as a wireless headset – without the need for an intermediary device. The Bluetooth technology in Oticon Opn supports stereo streaming of music and produces sound with high fidelity and bandwidth. When making calls, the

user's voice is picked up by iPhone microphone. iPhone also doubles as a basic remote control for the hearing aids.

Made for
📱 iPod ☐ iPhone ☐ iPad

Oticon ON App ON

The Oticon ON App makes it easy for Oticon Opn hearing aid users to have additional control of their hearing aids with just a touch of their fingertips. iPhone or the Android smartphone is connected directly to the hearing aids using Bluetooth 4.0/Bluetooth SMART.

The ON App allows users to adjust volume levels, switch between programs, settings and more. The app also offers a "find my hearing aid" search feature, counselling advice, links to user instructions and low battery notification.
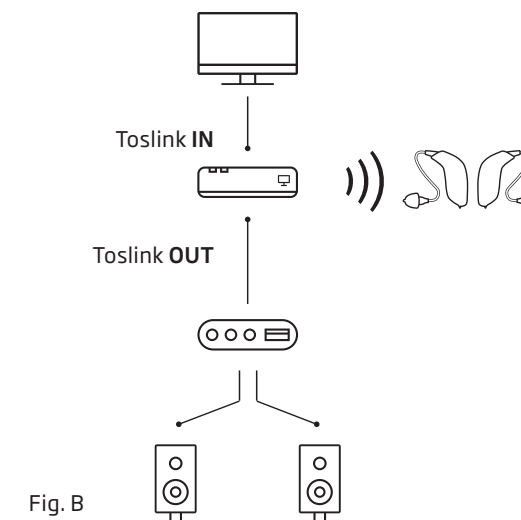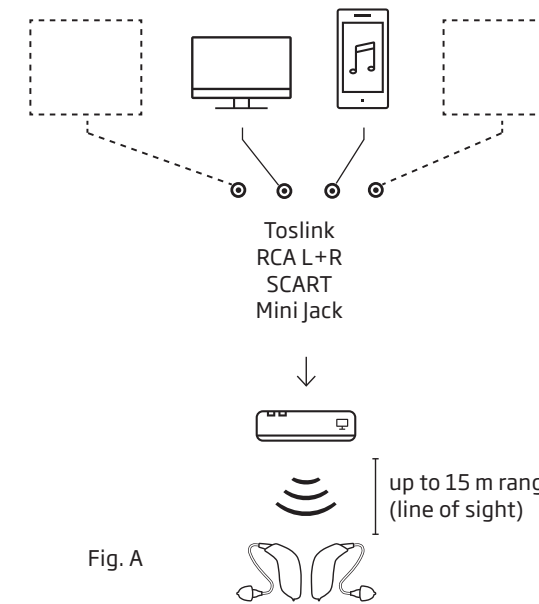
Please note that direct audio streaming is currently not supported by Android.

Download on the
App Store

GET IT ON
Google Play

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DID YOU KNOW?
That Made for iPhone means that you have basic control over your hearing aids directly from your iPhone, such as volume control and battery status.

Learn more at oticon.global

Oticon Opn and Oticon ON App are compatible with iPhone SE, iPhone 6s Plus, iPhone 6s, iPhone 6 Plus, iPhone 6, iPhone 5s, iPhone 5c, iPhone 5, 9.7-inch iPad Pro, 12.9-inch iPad Pro, iPad Air 2, iPad Air, iPad (4th generation), iPad mini 4, iPad mini 3, iPad mini 2, iPad mini, and iPod touch (5th and 6th generation). Devices must be running iOS 9.3 or later. The app also supports Apple Watch. When downloading the Oticon ON App on

iPad, search for iPhone apps on the App Store. Oticon ON App is compatible with devices powered by Android™ 6.0, Marshmallow or above. Please visit www.oticon.global/connectivity for more details on compatibility, or see the description for Oticon ON App on the App Store and Google Play.

Toslink
RCA L+R
SCART
Mini Jack

↓

up to 15 m range
(line of sight)

Fig. A

TV Adapter 3.0

TV Adapter 3.0 wirelessly transmits real-time stereo audio from a TV or home entertainment system directly to Oticon Opn hearing aids at a distance of up to 15 metres. Users can set the volume to their preferred level for a listening experience free from the distraction of surrounding noise. The TV Adapter is installed and placed at the TV. Practically any audio source can be connected to the TV Adapter including digital stereo (PCM) and Dolby Digital® (Optical Toslink input) (Fig. A).

As a unique feature the TV Adapter can be installed in most existing home entertainment systems (Fig. B).

Toslink **IN**

Toslink **OUT**

Fig. B

Remote Control 3.0

The Remote Control, roughly the size of a modern car key, gives users discreet control over Oticon Opn hearing aids. Users can easily adjust volume, switch between programs or control connectivity sources. Simple and easy to use, the Remote Control is especially beneficial for users with dexterity challenges.

> **TELL YOUR CLIENT**
> Turns your Oticon Opn hearing aids into a virtual wireless headset by streaming conversation from practically any mobile phone directly to your hearing aids.

ConnectClip

ConnectClip is used with mobile phones and other audio devices not supporting direct wireless connectivity (or streaming) to the hearing aids (Fig. C). The hearing aids function as a wireless headset and the user's conversation is picked up by the ConnectClip's built-in directional microphones.

Audio from the mobile phone streams to ConnectClip using standard Bluetooth technology. The audio is then streamed directly to the user's hearing aids using 2.4 GHz technology. ConnectClip works with almost any mobile phone produced since 2010.

Phone Adapter

Phone Adapter 2.0 connects wirelessly to the ConnectClip – allowing for hassle-free daily use of traditional phones.

USB Adapter

The USB Adapter (BTD 800) is a "plug and play" solution which wirelessly connects the ConnectClip to practically any computer for Skype, Messenger, Lync and other softphones.
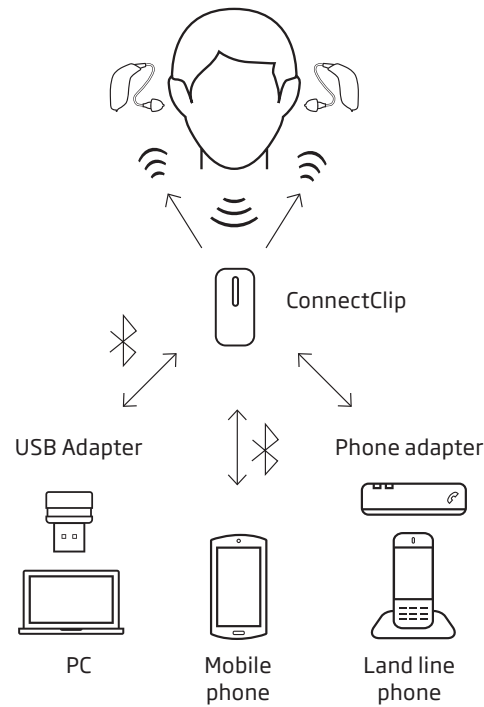
ConnectClip

USB Adapter — Phone adapter

PC — Mobile phone — Land line phone

Fig. C

The world's first Internet-connected hearing aid

Connect to your smart devices

Connect to your home security system

Connect to electricity and thermostat controllers

Connect to kitchen devices

Connect to your car

Connect to your TV, radio and game console

Open up to a world of endless connectivity possibilities
Through a unique Oticon cloud solution, Oticon Opn can be linked to the If This Then That (IFTTT) network. This allows users to connect to and control an endless range of devices used in everyday life.
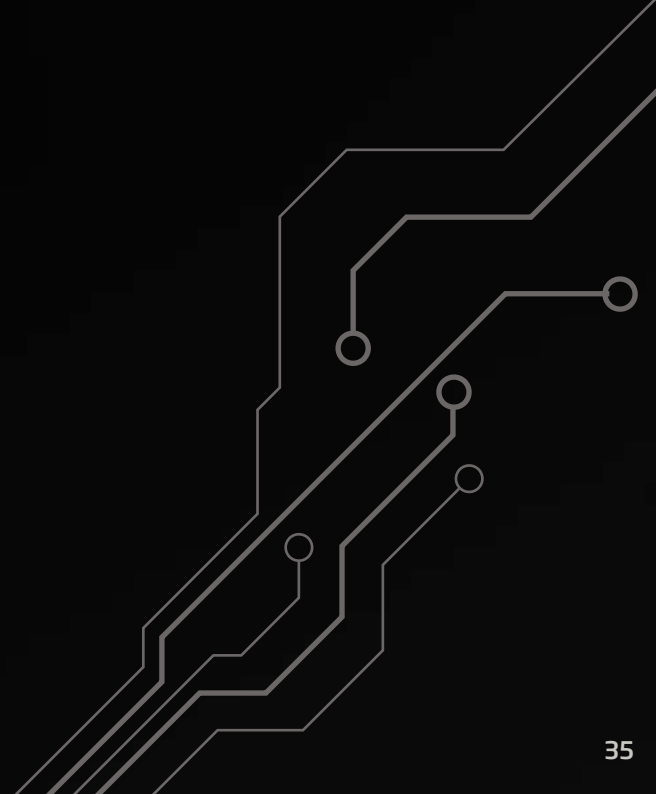
Imagine, for instance that hearing aids are able to notify users when an email is received, turn the home alarm system on and off or inform when someone is at the front door – all of this is possible with Oticon Opn.

Oticon has joined the IFTTT community and invites people to go to on.oticon.com to explore the endless possibilities available when connecting Oticon Opn.

Fitting

Oticon Genie 2 - New Features

Personalisation of OpenSound Navigator
The innovative OpenSound Navigator personalisation feature allows for situation-dependent noise reduction and directionality to build a personalised soundscape that works best for each user. Learn more at page 38.

New Client Target visualisation
Client Target facilitates easy comparison of the gain prescription with the current acoustic choices. You see the effects of your choices more clearly both in Genie 2 and with external verification equipment.

Client Target is the name for the way Oticon displays targets in the Genie 2 software.

When you have chosen your preferred prescriptive rationale, Genie 2 will show you the prescriptive gain targets for your client. The simulated gain or output curve indicates how closely you match those prescriptive gain targets. The simulated gain curve considers your chosen coupling, style and acoustics, and calculates the curve based on these. You can now see the

effects of your choices more clearly and it is now much easier to compare what you see on your Genie 2 screen with your external verification equipment screen. The Client Target view is implemented for all rationales in Genie 2.

To get a quick view of how the simulated gain curve changes, try comparing different acoustic options such as open dome and bass dome.
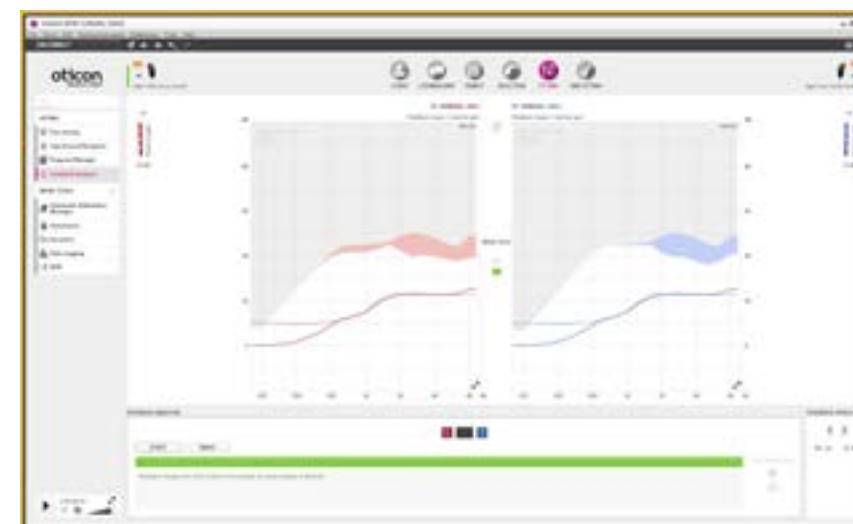

Feedback Analyser
The new Feedback Analyser offers a quicker, more comfortable, and precise way to determine each user's risk of feedback within the acoustic options you have chosen and allows you to adjust gain as needed.

With a new smarter functionality, the Feedback Analyser has more prominent placement in Genie 2 so that you can access it easily and quickly as part of the fitting flow for every client. Feedback analysis is always recommended.

Feedback Analyser is the perfect tool for analysing the risk of feedback for each client. Once analysed, you will have an overview of how much gain you can provide with your chosen style, coupling and venting. This allows you to make educated choices about the best fitting for your client.

The feedback analysis takes 10 seconds and is presented at a comfortable loudness level which depends on the hearing loss. A step-by-step guide takes you through the measurement from start to finish. A noise level indicator lets you know if background noise levels are acceptable for a valid and true measurement. This ensures a high quality analysis.

Gain can be adjusted up or down for each ear individually or both together. The measured feedback margin will remain in place but it is possible to trim above or below it as desired. Once a feedback margin is measured, it will be shown in the Fine-tuning screen by default, but can easily be deactivated.

FittingLINK 3.0
FittingLINK 3.0 employs Bluetooth technology to connect directly to Oticon Opn hearing aids without an intermediate device.

FittingLINK 3.0 is backwards compatible with current FittingLINK used for Inium and Inium Sense hearing solutions.

Creating an open sound experience

A simple two-step procedure creates an open sound experience. With the innovative OpenSound Navigator and YouMatic LX in Genie 2, you can easily build a personalised sound experience with access to all details in their environment and, at the same time, superior speech understanding.

Users are pro-actively engaged in the fitting process with questions and sound demos that make it easy for them to express what they like to hear without the need to describe their preferences.

Step 1
Establish your client's listening preferences in the 'Personalisation' menu to take individual preferences into account when prescribing gain and automatics.

Ⓐ Genie 2 features a personalisation process that includes a few simple questions to better capture the variations in sound preferences. In addition to listening preferences, age, gender, hearing aid experience and sometimes language will influence the prescribed gain and automatics.
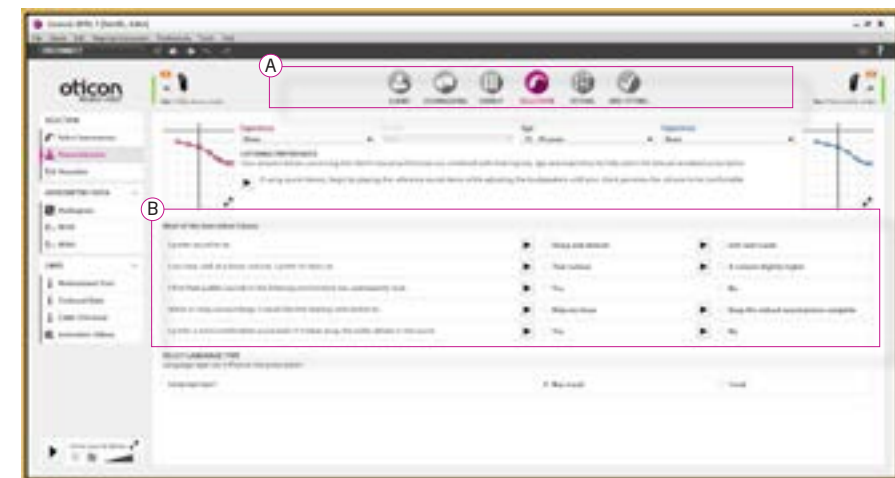
Ⓑ For best results, present the sound sample for each question while clients are wearing their hearing aids, through headphones, or via loudspeakers, depending on each client's hearing loss and your clinical setup.

Once the personalisation has been completed, it will impact the prescription and settings for:
• OpenSound Navigator
• Soft sound perception trimmer
• Brightness trimmer
• Gain prescription
Each can be fine-tuned to more accurately meet client preferences in the Fitting step.

The personalisation screen should be revisited when experience level changes or greater audiometric changes occur.

Step 2
Go to OpenSound Navigator to adjust further with YouMatic LX.

Ⓒ **OpenSound – Transition:** The control lets you choose how much help is needed in the stage between simple and complex environments. In other words, how early in this transition will your client want the hearing aid to help more? You can choose between a Low, Medium, and High amount of help. As an example, when choosing High, the hearing aid will step in more aggressively to reduce unwanted sounds, even if the environment is not yet complex. OpenSound Navigator transition choices are displayed visually on the Transition bar above the control panel and in the illustration with the head, background sounds are reduced in size as more help is applied.

Ⓓ **Noise reduction controls:** Adjustments to noise reduction are divided into Noise Reduction Simple and Noise Reduction Complex. Default settings are based on the clients answers to the questions in 'Personalisation/Listening preference' or will default to a Medium profile. Adjustments are made by clicking the +/- buttons. Noise reduction choices are displayed visually in the speech waveforms.

Ⓔ **Noise reduction on/off:** By default, noise reduction is on because it is an integral part of the open sound experience, but it can easily be deactivated if needed by unchecking the box on the lower left.

Ⓕ **Directionality setting:** In addition to the three transition settings you have two conventional directionality settings available. See the transition settings overview below.

Transition settings overview

		Pinna omni	Mimics sound as received by human outer ear
More help	Open Automatics	OpenSound Navigator Low	Help is triggered only when environment has become complex. Adaptive sensitivity to noise from sides and behind.
		OpenSound Navigator Medium	Help is triggered when environment is moderately complex. Adaptive sensitivity to noise from sides and behind.
		OpenSound Navigator High	Help is triggered with emerging noise. Adaptive sensitivity to noise from sides and behind.
		Full directionality	Focus on sound in front unless environment is simple. Adaptive sensitivity to noise from sides and behind.

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PEOPLE FIRST