

INTRODUCING THE WORLD'S FIRST **MACHINE LEARNING** HEARING AID

# INTELLIGENT TODAY SMARTER TOMORROW

**WIDEX EVOKE™**  
HEARING HAS EVOLVED





# HEARING HAS **EVOLVED**

**WIDEX EVOKE™** is based on our entirely new chip platform and is the first product inspired by our **Real-Life Hearing™** philosophy. The goal of every Widex hearing aid is to make perfect hearing effortless, enabling users to fully connect with every moment of their lives.





Hearing happens in real life, not in a lab or in a clinic. And since real life changes from one moment to the next, automation has been our goal for years.

Automation also makes sense, since most hearing aid users benefit from applying their cognitive resources to the actual task of listening, rather than thinking about which program they should use.

But automation has its challenges. What should be amplified? What shouldn't? What does the user intend to hear? And what happens when automation doesn't quite meet the user's needs?

Clients reach out to you, of course. And this sometimes has its own set of challenges, including describing (and interpreting) their problems and finding an effective solution, fast.

Some users take matters into their own hands – even if they're not sure how to adjust complex controls correctly. **So which is better: user controls or automation?**

Now you don't have to choose.





**THE BEST  
OF BOTH  
WORLDS**





## INTELLIGENT AUTOMATION MEETS **SMARTER** USER CONTROLS

Imagine excellent, tailored sound with superior environment identification and more automation than ever before. Add effective, intuitive controls that improve the automation – controls that quickly guide users to their desired hearing experience in a totally new way. All on a platform intelligent enough to handle true innovation.

Introducing **WIDEX EVOKE™** – the only hearing aid that keeps on learning from the user’s own real-life listening experiences – and from those of other users around the world – to constantly improve how your clients hear. Now, cutting-edge technology puts you at the forefront of a **new era in hearing**, in which both your and your clients’ satisfaction evolve long after the initial fitting.

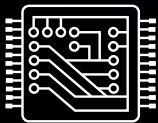
**WIDEX EVOKE™**  
HEARING HAS EVOLVED



# THE NEW WIDEX EVOKE™ E-PLATFORM

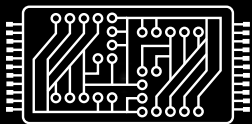
The chipset in WIDEX EVOKE™ has more connections, more processing power and more flexibility than any platform we've ever produced. It is the first hearing aid solution to enable machine learning capabilities. The key to its incredible power is a flexible core with dedicated RAM, allowing new features or fitting data to be added without affecting the performance of the accelerated core. Additionally, the E-platform can access the huge processing power of a smartphone via our pure-link 2.4 Ghz technology. This makes the large calculations necessary for machine learning features possible.

## E-PLATFORM



### Flexible core

This "open" core adds flexibility and additional processing power to the platform and enables both superior automation AND user control.



### Accelerated core

Despite all the calculations and processes on the integrated circuit, this core uses very little power.

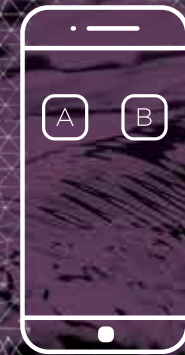
## CONNECTIVITY



### Pure-link 2.4 Ghz

Smartphone integration via Bluetooth expands processing capabilities.

## MACHINE LEARNING



### SMARTPHONE APP

EVOKE™ uses the computational power of the smartphone to operate machine learning features such as SoundSense Learn.



## CLOUD DATA



### Cloud

The platform spreads across many processing cores, with the potential to link even more cores into a network of extraordinary processing power to help users.

## MACHINE LEARNING HELPS **IMPROVE HEARING IN REAL LIFE**

Using a stepwise approach, the EVOKE™ app collects observations based on A/B comparisons presented for the user. Based on the input, EVOKE predicts the user's preferences and suggests a new setting. After the completion of 15-20 comparisons, the EVOKE™ machine learning algorithm has performed something equivalent to more than 2 million manual comparisons, which would be impossible for any user.

Now, all the end user must do is keep his auditory intention in mind and rate the suggested settings accordingly. The EVOKE™ machine learning algorithm takes care of the rest.



# INTELLIGENT TODAY

## WITH **MORE NATURAL SOUND**

WIDEX EVOKE™ features a powerful new Fluid Sound Controller that handles all the automatic processing more accurately and faster than ever before. It also features new, more specific sound classes, new programs and improved sound rationales, developed in response to the demands of the modern user's hearing life.

Together, these features give the user a more refined and responsive hearing experience from day one. They also make it easier to tailor personalised hearing solutions with ultimate audiological precision.



# SMARTER TOMORROW

## WITH **MACHINE LEARNING**

WIDEX EVOKE™ is the first hearing aid to use machine learning to discover the user's preferences and help guide them to a better, more personalised listening experience. This means that the user's hearing continues to

evolve even after fitting. Widex also learns from the data generated by each user's choices. We use this anonymous data to create more precise algorithms for firmware updates, so that EVOKE™ continues to benefit users in their real-life hearing.

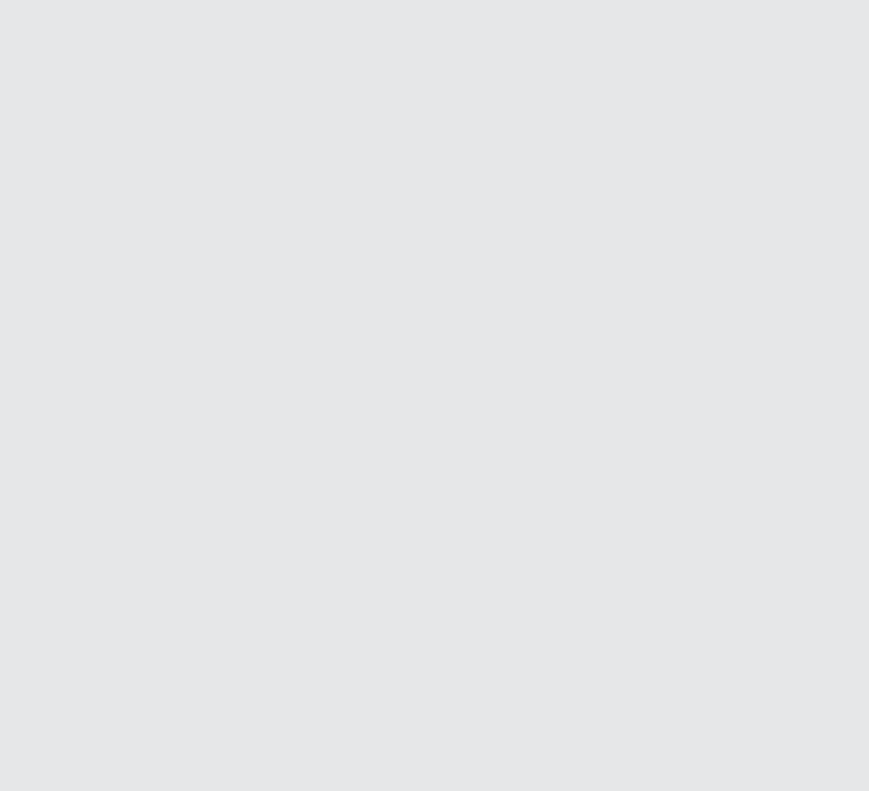


# NATURALLY **PRESERVES** SOUND

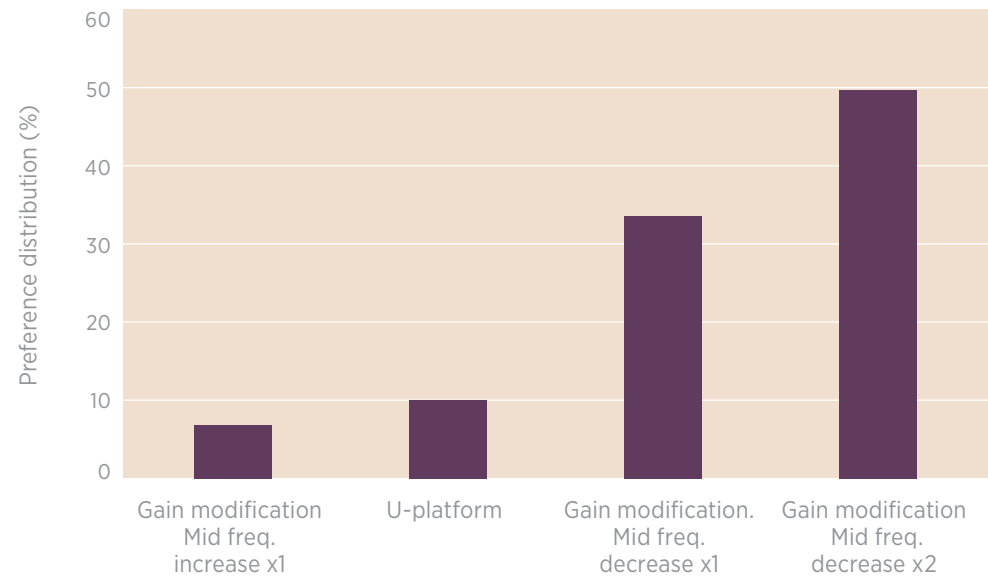
## **NATURAL SOUND - EFFORTLESS HEARING**

With its **improved sound rationales**, WIDEX EVOKE™ delivers a listening experience so superior that both new and previous Widex hearing aid users will notice the difference. Hearing becomes more effortless and natural. Four new hearing rationales also make fitting Widex more personalised than before.





## FITTING RATIONALE PREFERENCE



Three alternative gain settings were tested against the previous U-platform (N=13). The experiment showed a strong preference for two new gain settings. The graph shows the preference distribution (in %) for the different gain settings in real-life scenarios. For WIDEX EVOKE™ we have implemented two new modified gain prescriptions with a decrease in the mid frequencies. These two gain settings are optimised for experienced and first-time users respectively.\*

\* WidexPress: "The Widex fitting rationale for EVOKE™" by Erik Schmidt, Ph.D.



# ACCURATELY ANALYSES SOUND SOURCES

## TWICE AS MUCH TRAINING

WIDEX EVOKE™ intuitively analyses your clients' sound environment and prioritises the most important sound sources using its unique **Fluid Sound Analyzer**. With twice as much training as our previous classifier, EVOKE™ maps out the environment more accurately than ever to select the correct sound class.

## TWO NEW SOUND CLASSES. TWO NEW PROGRAMS

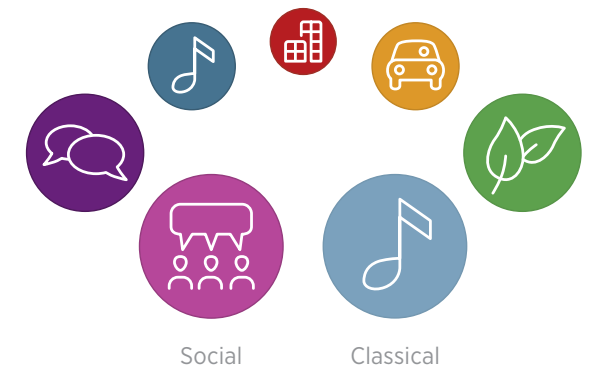
We've added new Social and Music sound classes in response to what we've learned about the changing needs of hearing aid users today.

The new **Social sound class** bridges the gap between our Party and Quiet classes and is specifically designed to give the best sound in small social gatherings.

The new music sound class accommodates different styles of music: **Contemporary and Classical**.

These changes are designed to improve your client's experience of different music styles.

WIDEX EVOKE™ includes two new programs as well: an **Impact program** for listening in challenging situations, along with the return of our dedicated **Comfort program**.



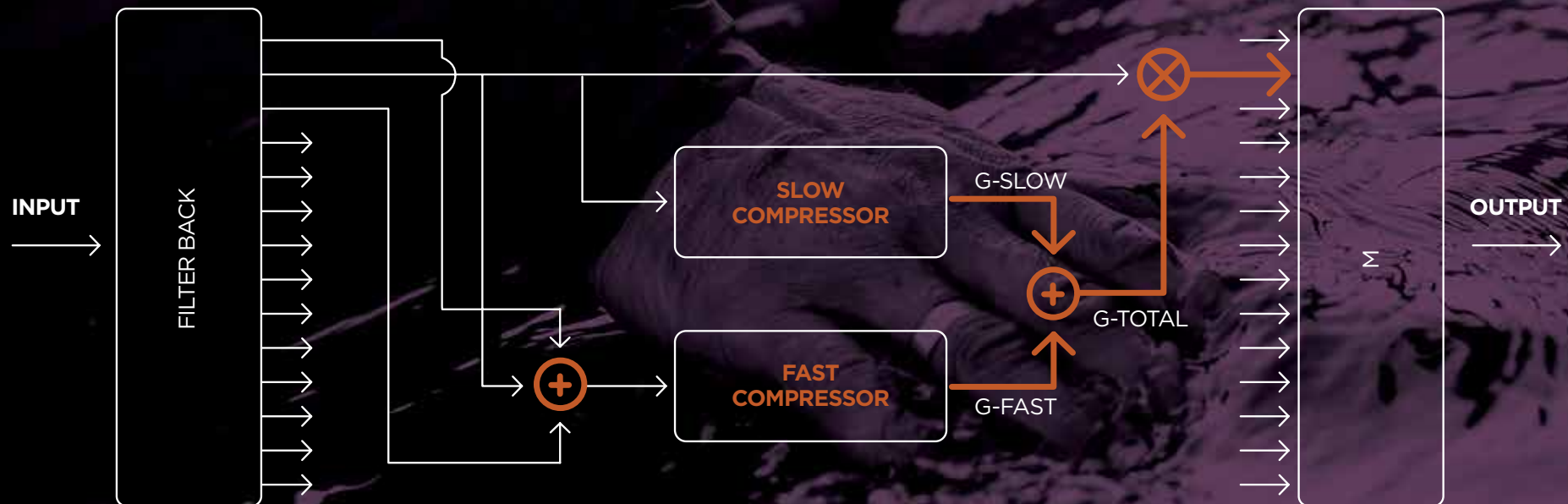
# ADJUSTS INTELLIGENTLY TO MORE PARAMETERS THAN BEFORE

**MORE** PARAMETERS.  
**NEW** FEATURES.  
**FASTER** ADAPTATION.

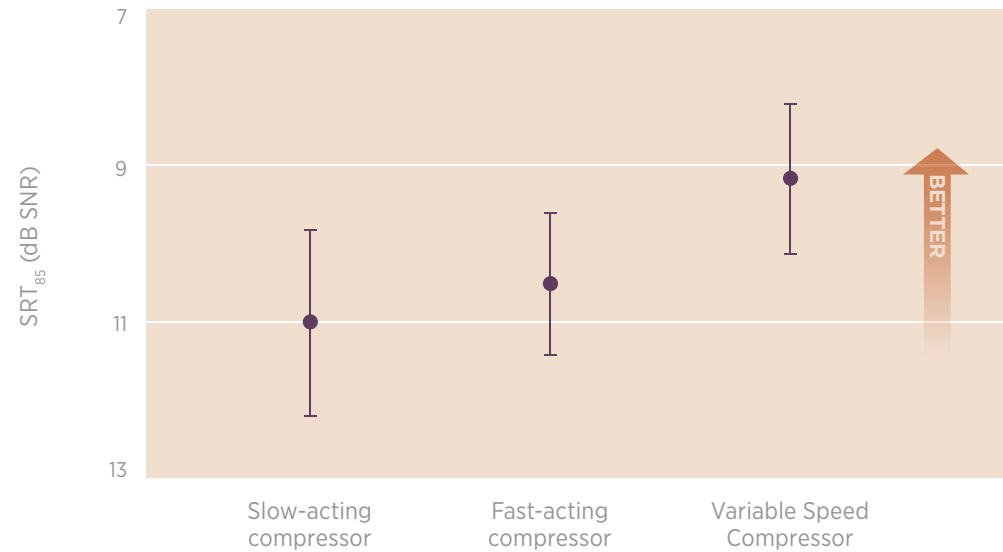
The **Fluid Sound Controller** in WIDEX EVOKE™ now adjusts more parameters than ever before, in every sound class and in real time.

It includes a Variable Speed Compressor that combines the natural, nuanced sound of slow compression with the benefits that fast compression can provide in dynamic environments.

THE VARIABLE SPEED COMPRESSOR



## VARIABLE SPEED COMPRESSOR SPEECH INTELLIGIBILITY



The above graph shows the effect of compressor types on mean Speech Reception Threshold at 85% words correct (N=16). Error bars represent 95% confidence intervals. On average, the Variable Speed Compressor obtains 85% correct SRT at 2dB lower compared to the two other compressor types. The Variable Speed Compressor provides significantly better speech intelligibility than the slow-acting compressor.\*

\* Data on file/Submitted for publication

The Variable Speed Compressor comprises two separate compressors: a primary, slow-acting compressor and a fast-acting compressor working in parallel. This enables us to preserve the temporal waveform as well as the audibility cues of the system.

With one particular channel, you can see that the signal is split so that it goes to a slow compressor (Slow), which determines the overall gain of the hearing aid. Another branch of the same signal goes to a fast compressor (Fast) to work on shorter-term fluctuations of the signal. The output from the fast compressor and the slow compressor is added together to give you the output at that particular channel.

# EFFORTLESSLY GUIDES THE USER TO GREAT SOUND

## **MORE CONTROL. LESS EFFORT**

Hearing technology today must address the industry's most interesting paradox: users want more control over their sound, but they want to forget they're wearing a hearing aid. WIDEX EVOKE™ addresses this challenge with new **SoundSense Technology**, which consists of SoundSense Learn and SoundSense Adapt.

The **SoundSense Learn** feature, available via pure-link II technology to the EVOKE™ app,

leverages the power of machine learning to effortlessly guide the user to a better, more personalised hearing experience with just a couple of taps in a smartphone app available for iOS and Android devices.

And because users can refine their sound themselves, on the go, there's no need for them to try and remember sounds and then describe them to you when they encounter troublesome listening situations.

## **AS SIMPLE AS POINTING TO WHAT SOUNDS BETTER**

Once you've fitted your clients, they can use the EVOKE™ app to take personal control of their hearing. All they have to do is listen to two sound profiles and point to which they prefer: A or B. No need to learn complex controls. And the more your clients use the app, the more the hearing aid learns about how they want to hear. EVOKE™ never stops improving.

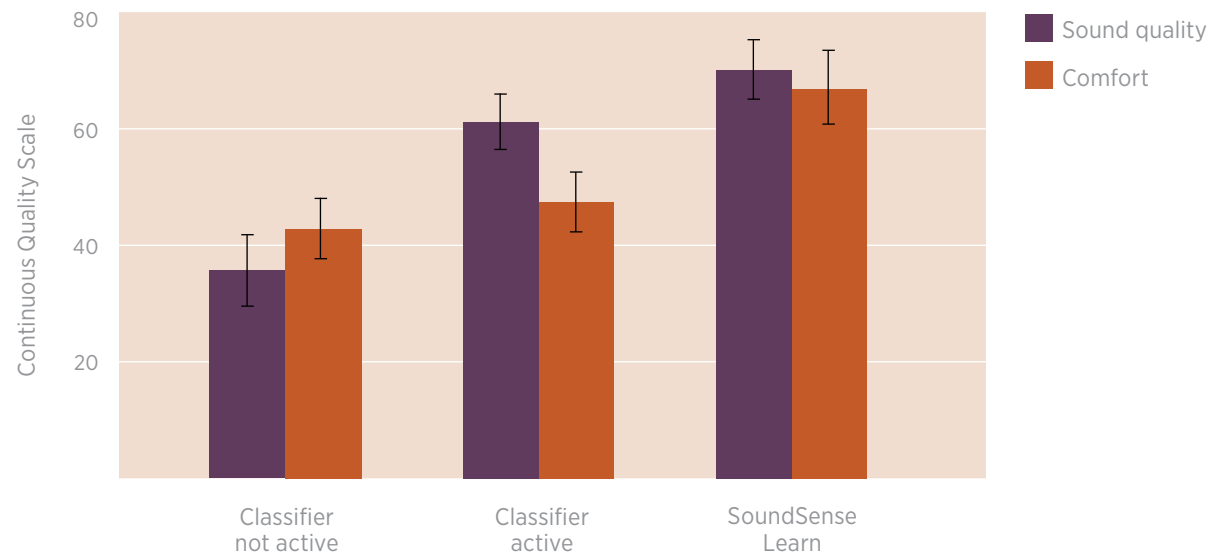




## A DIFFERENCE YOU CAN HEAR

Trials have shown that users report a subjective improvement in their listening experience by using SoundSense Learn.

## SOUNDSense LEARN EFFECT



The effect of SoundSense Learn on the perceived comfort and sound quality, averaged across a wide selection of sound scenarios, is documented above.

The graph shows mean ratings (N=19) of SoundSense Learn compared to the Universal program with and without the Classifier active. Error bars represent 95% confidence intervals. The SoundSense Learn settings provide significant improvements in perceived comfort and sound quality.\*

\* Data on file

**INTELLIGENTLY**  
REMEMBERS  
THE USER'S  
PREFERENCES



## **ONCE TOUCHED, ALWAYS REMEMBERED**

The one-touch **SoundSense Adapt** control feature in WIDEX EVOKE™ uses adaptive learning to remember the user's preferred settings across multiple parameters for each environment. This results in better sound immediately, even if the user has never visited that location before. This environmentally linked, adaptive feature can be accessed using the new WIDEX TONELINK™ smartphone app, with on-board hearing aid controls or by using existing DEX accessories.





# CONTINUOUSLY EVOLVES

## HEARING **PERFECTED** IN THE REAL WORLD

WIDEX EVOKE™ is **the world's first hearing aid to use machine learning**. Every day it helps every user's experience of sound. Plus it learns from the listening preferences of users all over the world - moving the evolution toward better hearing from the lab and the clinic into real life.



## THE MORE WE **LEARN**, THE BETTER THE WORLD **HEARS**

In the first iteration of WIDEX EVOKE™, each time someone uses the device's SoundSense Learn feature, we learn more about how our users prefer to hear. We'll use that anonymous data for firmware updates.

However, it is our goal to evolve WIDEX EVOKE™ so that improvements in sound quality shaped by user experiences can benefit users continuously and in real time.

That means the hearing aid your clients buy today will be even better tomorrow.

# EVOKE™ APP\*

## GUIDES THE USER TO PERSONALISED HEARING

The EVOKE™ app allows users to refine their hearing in real life by simply comparing sound profiles in real time. The more often they do this, the more WIDEX EVOKE™ learns about how they want to hear in the moment.

The EVOKE™ app also allows users to:

- Mute, adjust hearing aid volume and use the equalizer to adjust sounds
- Create personal programs with your own photos and sound adjustments
- Add locations to programs and locate your hearing aids if lost



\*The EVOKE™ app is for the EVOKE™ F2 smartphone-compatible model.

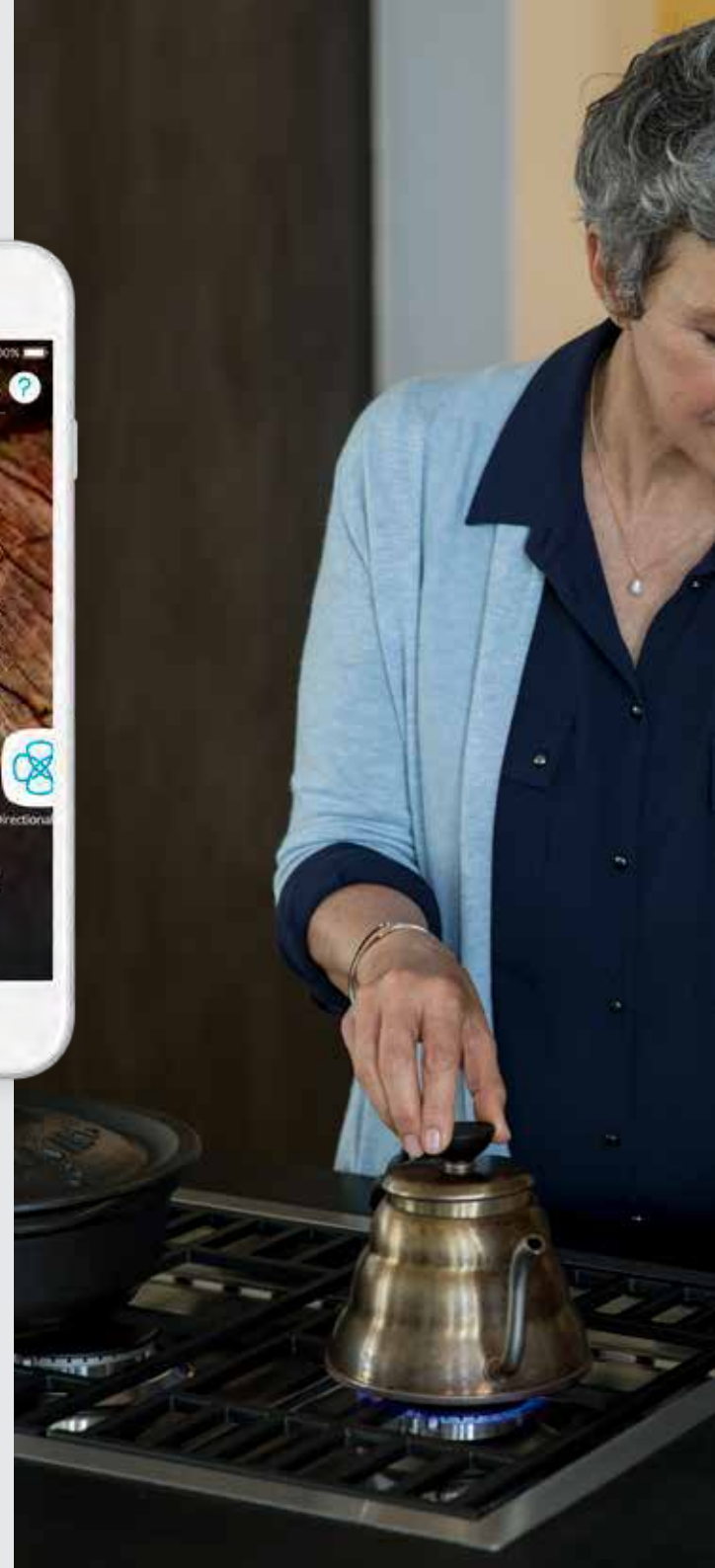
Menu  
Battery status &  
help function

Current program

Select program

Mute and volume controls

Sound menu

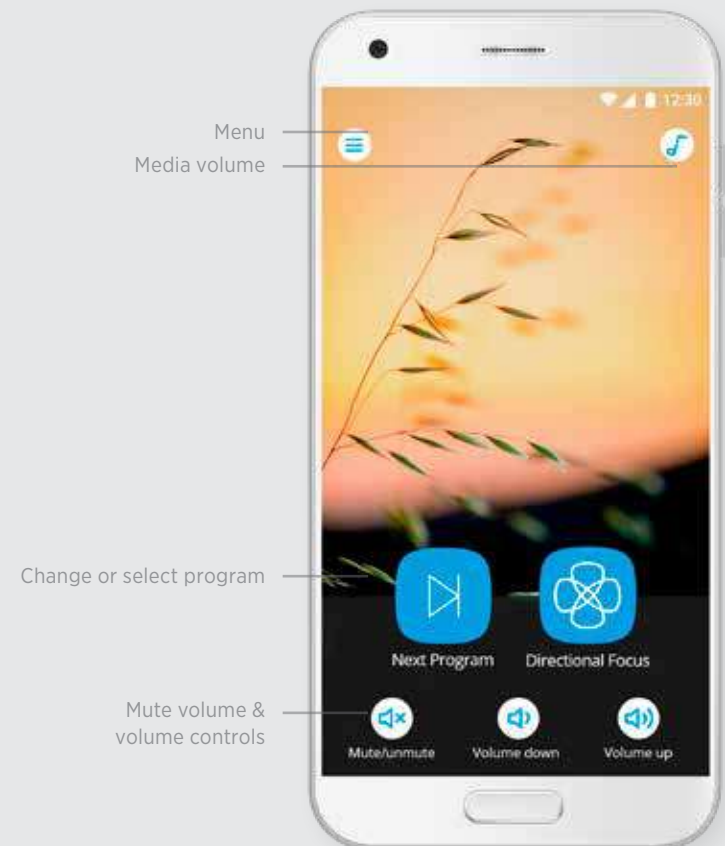




# TONELINK APP\*

## DISCREET CONTROL OF KEY FUNCTIONS

WIDEX EVOKE™ users can turn their smartphones into remote controls to discreetly change programs, adjust volume, and mute and change directional focus. TONELINK's simple interface is right at their fingertips. Hearing aid adjustments become such a naturally integrated part of daily life that they might even forget they're wearing EVOKE™. There's no need to carry separate assistive listening devices or to touch the hearing aids.



\*The TONELINK app is for all EVOKE™ models (except the CIC-M model)

# THE WIDEX EVOKE™ FAMILY



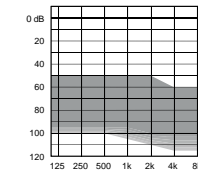
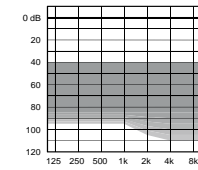
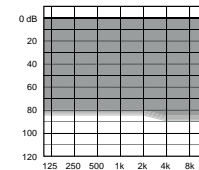
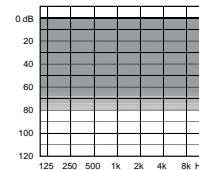
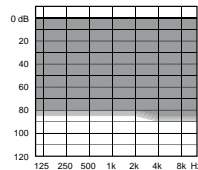
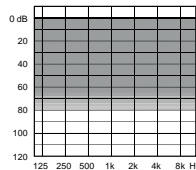
## STYLE

### PASSION RIC

### FUSION RIC/RITE

Receiver	S-receiver	M-receiver	S-receiver	M-receiver	P-receiver	HP-receiver
Open fit option	Yes	Yes	Yes	Yes	No	No
Battery size	10	10	312	312	312	312
Battery life	100 hrs	100 hrs	170 hrs	170 hrs	160 hrs	155 hrs
ZPower rechargeable solution	No	No	Yes	Yes	Yes	Yes
Preference control	Via DEX	Via DEX	Optional/Via DEX	Optional/Via DEX	Optional/Via DEX	Optional/Via DEX
Program shift	Via DEX	Via DEX	Standard/Via DEX	Standard/Via DEX	Standard/Via DEX	Standard/Via DEX
Telecoil	Via DEX	Via DEX	Yes	Yes	Yes	Yes
Widex CROS compatible	Yes	Yes	Yes	Yes	Yes	Yes
DEX devices*	All	All	All	All	All	All
Max gain	63 dB	69 dB	63 dB	68 dB	70 dB	84 dB
MPO	118 dB SPL	124 dB SPL	118 dB SPL	124 dB SPL	131 dB SPL	137 dB SPL
Bandwidth	100 Hz - 10000 Hz	100 Hz - 10000 Hz	100 Hz - 10000 Hz	100 Hz - 9200 Hz	100 Hz - 6700 Hz	100 Hz - 6000 Hz
IP-rating	IP-68	IP-68	IP-68	IP-68	IP-68	IP-68

\* COM-DEX, CALL-DEX, UNI-DEX, RC-DEX. TV-DEX, FM+DEX, PHONE-DEX 2 (Available in some countries only).







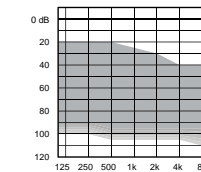
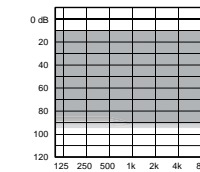
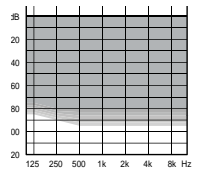
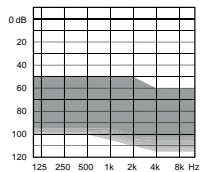
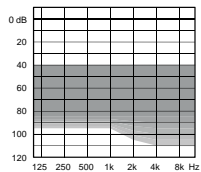
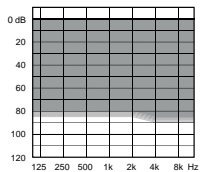
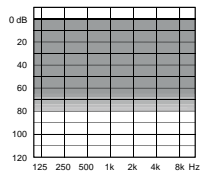
### FUSION2 RIC/RITE

### FASHION MINI

### FASHION

### FASHION POWER

S-receiver	M-receiver	P-receiver	HP-receiver	-	-	-
Yes	Yes	No	No	Yes	Yes	No
312	312	312	312	312	312	13
165 hrs	165 hrs	160 hrs	155 hrs	155 hrs	160 hrs	285 hrs
Yes	Yes	Yes	Yes	No	No	No
Optional/Via DEX	Optional/Via DEX	Optional/Via DEX	Optional/Via DEX	Optional/Via DEX	Standard/Via DEX	Standard/Via DEX
Standard/Via DEX	Standard/Via DEX	Standard/Via DEX	Standard/Via DEX	Standard/Via DEX	Standard/Via DEX	Standard/Via DEX
Yes	Yes	Yes	Yes	Via DEX	Yes	Yes
No	No	No	No	Yes	Yes	Yes
All	All	All	All	All	All	All
62 dB	69 dB	70 dB	74 dB	64 dB	71 dB	77 dB
118 dB SPL	124 dB SPL	132 dB SPL	133 dB SPL	135 dB SPL	137 dB SPL	138 dB SPL
100 Hz - 10000 Hz	100 Hz - 10000 Hz	100 Hz - 6750 Hz	100 Hz - 7300 Hz	100 Hz - 8450 Hz	100 Hz - 7600 Hz	100 Hz - 6250 Hz
IP-68	IP-68	IP-68	IP-68	IP-68	IP-68	IP-68



### COLOUR RANGE BTE MODELS

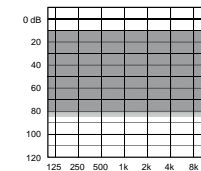
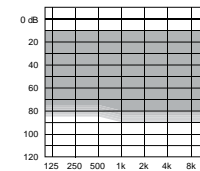
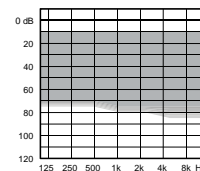
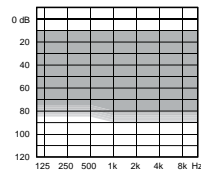
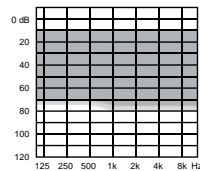


# THE WIDEX EVOKE™ FAMILY

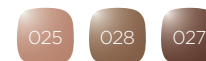


STYLE	CIC-M	CIC	IM	IP	XP
<b>Receiver</b>	-	-	-	-	-
Open fit option	No	No	No	No	No
Battery size	10	10	312	312	312
Battery life	105 hrs	100 hrs	165 hrs	125 hrs	140 hrs
ZPower rechargeable solution	No	No	No	No	No
Preference control	-	Via DEX	Optional/Via DEX	Optional/Via DEX	Via DEX
Program shift	-	Via DEX	Optional/Via DEX	Optional/Via DEX	Via DEX
Telecoil	-	Via DEX	Via DEX	Via DEX	Yes
Widex CROS compatible	-	Yes	Yes	Yes	Yes
DEX devices*	-	All	All	All	All
Max gain	60 dB	63 dB	63 dB	67 dB	68 dB
MPO	118 dB SPL	124 dB SPL	123 dB SPL	127 dB SPL	128 dB SPL
Bandwidth	100 Hz - 10000 Hz	100 Hz - 9700 Hz	100 Hz - 10000 Hz	100 Hz - 10000 Hz	100 Hz - 9800 Hz
IP-rating	IP-68	IP-68	IP-68	IP-68	IP-68

\* COM-DEX, CALL-DEX, UNI-DEX, RC-DEX, TV-DEX, FM+DEX, PHONE-DEX (Available in some countries only).



Colour range  
CIC/ITE models



# COMPLETE DEX CONNECTIVITY

With WIDEX EVOKE™, connectivity doesn't stop with the apps. Our range of DEX communication solutions keeps users connected to a world of sounds.

## COM-DEX

### FEATURES

- True hands-free communication
- Compatible with most mobile phones
- Streams audio from most Bluetooth devices
- Available in three stylish colors
- 8 hours of streaming time
- 8 days of standby/control time\*
- Comfortable fabric neck loop
- Controls your hearing aids via COM-DEX app

\*12 hours per day



## COM-DEX REMOTE MIC

### FEATURES

- Connects wirelessly via COM-DEX to all Widex wireless hearing aids
- Convenient steel clip for easy attaching
- Mute/unmute microphone directly on the COM-DEX Remote Mic button
- Microphone can also be controlled using the COM-DEX app
- Up to 8 hours of streaming time



## UNI-DEX

### FEATURES

- Connects to all devices with 3.5 mm jack output
- Streams automatically
- Built-in microphone for hands-free talking
- Battery life 40 hours when streaming
- Battery recharges in 1 hour
- Room Off feature



## CALL-DEX

### FEATURES

- Connects to most mobile phones with 3.5 mm jack output
- Streams automatically
- No buttons
- Constant streaming up to 80 hours
- Standby up to 3 weeks
- Small and easy to handle



## TV-DEX

### FEATURES

- High-quality audio
- Ultra-low delay Echo-Free™
- Inputs for both TV and hi-fi systems
- Room Off feature
- 10 hours of non-stop capacity
- Rechargeable using the TV-Base



## PHONE-DEX 2\*

### FEATURES

- Integrated answering machine
- Phonebook with 150 contacts
- 14 hours of call time on battery and 320 hours of standby time
- Connects automatically to all Widex wireless hearing aids
- Large colour display
- Can also be used as a regular phone – a phone for the whole family



\* Check with your local Sales Company regarding availability

## RC-DEX

### FEATURES

- Program toggle
- Volume up/down
- Keyring attachment
- Approximately 12 months of battery life
- Lock switch



## FM+DEX

### FEATURES

- A flexible device for FM streaming
- Small and easy to handle
- Antenna range up to 30 metres
- 10 hours of battery capacity





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HIGH DEFINITION HEARING