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Disclosure: ASHA CEU Requirements

RaDora Dinnan, AuD  
Customer Trainer

I have a financial relationship to disclose:  
- Employee of Phonak who receives a salary

I have no non-financial relationship to disclose

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Learner Objectives

- Participants will be able to describe the most recent innovations available in the Phonak Audéo family.
- Participants will be able to describe the different form factors available in the Phonak Audéo family.
- Participants will be able to describe what features are available at different levels of technology in the Phonak Audéo family.

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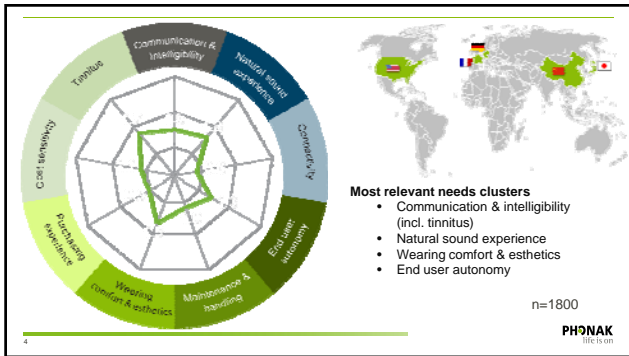
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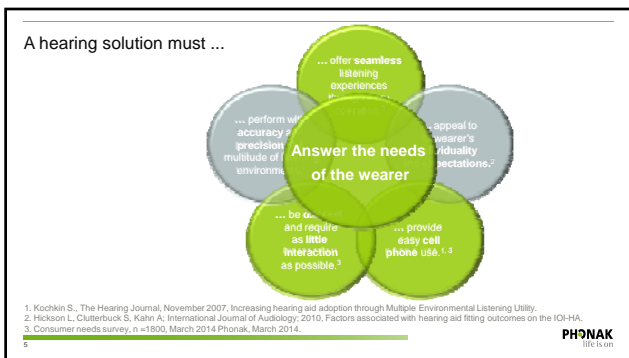
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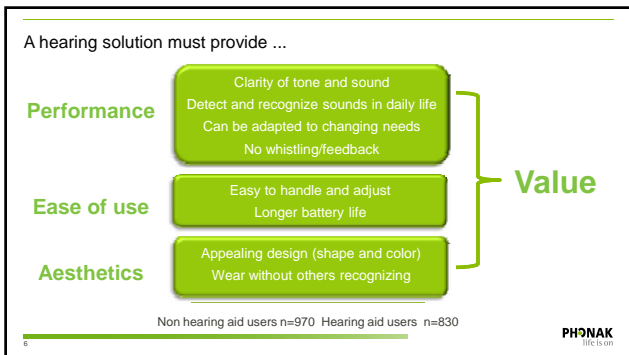
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### The Hardware: Venture chip

- Reduction in power consumption when streaming (up to 30%)
- New analog to digital processor
- More non volatile memory

	Pallio	Core	Spice+/Quest	Venture
	Savia/Art	Exelia	Ambra/Bolero	Audeo V
Transistors	7.5 million	8 million	16 million	45 million
Million operations per second	100	120	200	552
Structure	130nm	90nm	65nm	65nm

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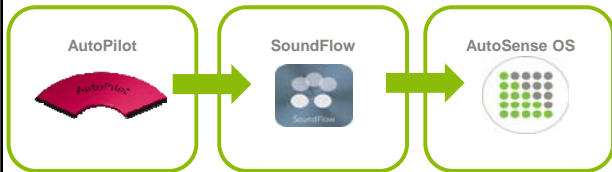
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### The evolution of automation technology



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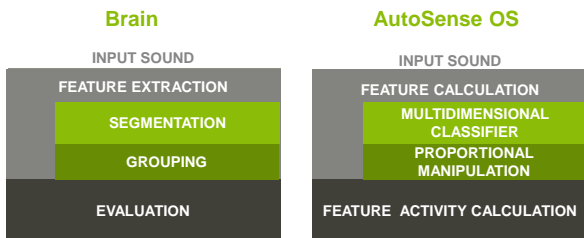
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### Auditory and acoustic scene analysis



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Auditory scene analysis: computational models. Image adapted from the International Encyclopedia of the Social & Behavioral Sciences 1992

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Accuracy and precision are both important

Accuracy:

- How many sound environments can the hearing aid correctly identify?

Example:

"Am I in noise" or "Am I in quiet"? → EASY  
"Am I in a noisy car" or "Am I in a noisy café"? → HARDER

Why is accuracy important?

- The hearing aids will accurately recognize the sound environment

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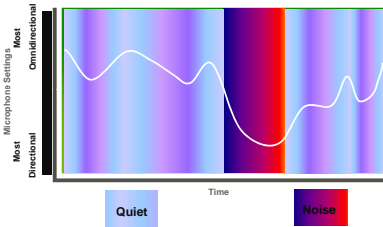
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AutoSense OS: accuracy and precision at its most powerful

Precision unlocks the potential provided by accuracy



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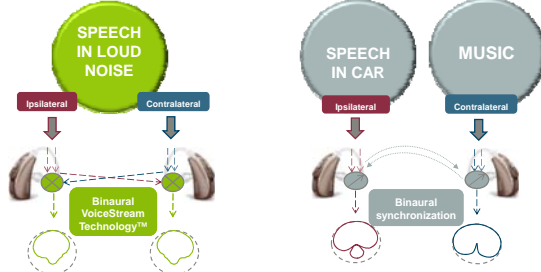
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AutoSense OS - Binaural directionality approaches



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A program structure to match listening environments and people's needs

AutoSense OS Programs	Description
<b>Calm</b>	Optimal gain setting for speech understanding and listening comfort
<b>Speech in Noise</b>	Adapts and reduces noise from behind in real time
<b>Speech in Loud Noise</b>	Zooms in on single voice in diffuse noise environment
<b>Speech in Car</b>	Reduces broadband noise in car to create stable listening environment
<b>Comfort in Noise</b>	Actively reduces noise in environment for increased comfort in absence of speech
<b>Comfort in Echo</b>	Recognizes reverberation and applies gain reduction
<b>Music</b>	Expanded dynamic range and slow compression for fuller and richer experience

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AutoSense OS  
Speech in Loud Noise

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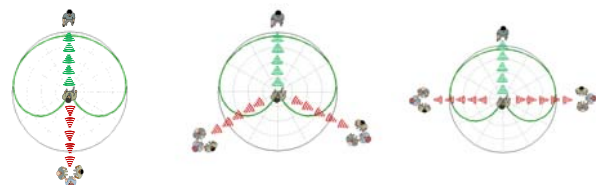
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Fixed Directional Beamformer



Attenuation of noise due to the null position will lead to large improvement in signal-to-noise ratio

Less improvement in signal-to-noise ratio

No improvement in signal-to-noise ratio

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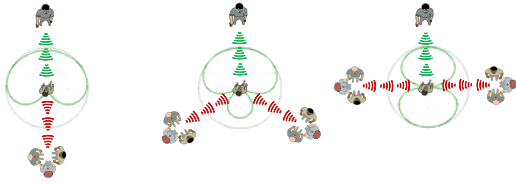
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### Adaptive Directional Beamformer



Beamformer maintains maximal gain reduction from directions of greatest noise sources

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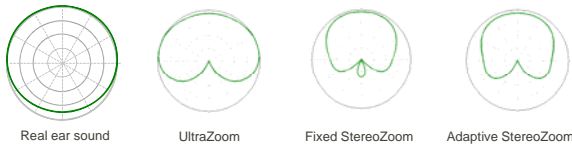
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### Comparison of Venture microphone modes



Real ear sound

UltraZoom

Fixed StereoZoom

Adaptive StereoZoom

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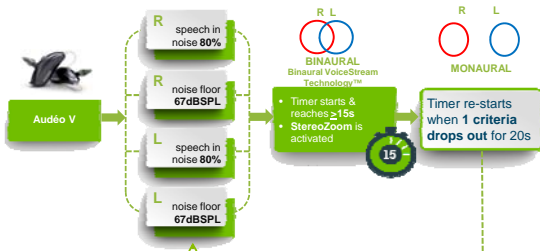
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### AutoSense OS – Speech in Loud Noise (SPILN) / auto StereoZoom



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**AutoSense OS**  
Comfort in Echo

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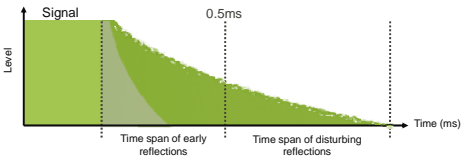
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**How the echo is reduced**

- Why is it important?
  - Negative effects of reverberation on amplification
- What is it?
  - Looks for "tails" and cleans up "pauses"




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**AutoSense OS**  
Speech in Car

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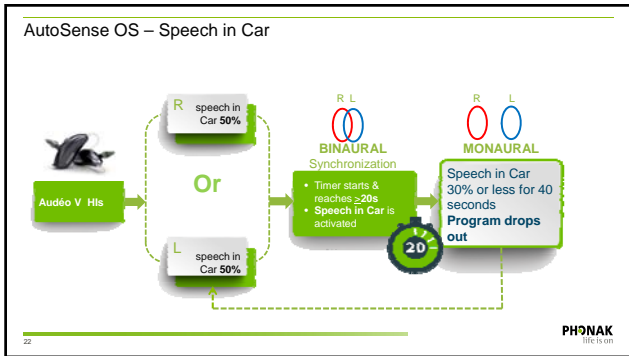
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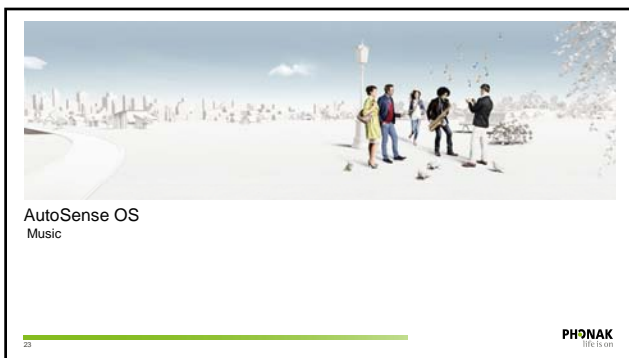
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### Music program information

	Venture Music Program
High Input Limit	118 dB SPL
Input dynamic range	101 dB SPL
Compression	Variable release times
Directionality	Omni; RealEar Sound; Fixed Beamformer
WhistleBlock	Independent adjustment in AutoSense OS

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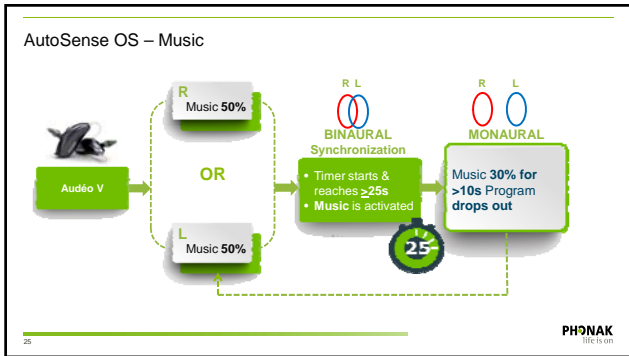
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### Phonak Audéo V: Highlights

- 4 new models, all with program button
- Audéo V-10 wireless with Binaural VoiceStream Technology™
- New high-tech composite material
- Audéo V-13 with separate volume control and push button
- Tinnitus Balance in all Audéo V models

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**Audéo V-10 : Cosmetic appeal with wireless capabilities**

- Push-button control
- Full wireless capabilities
- IP 57



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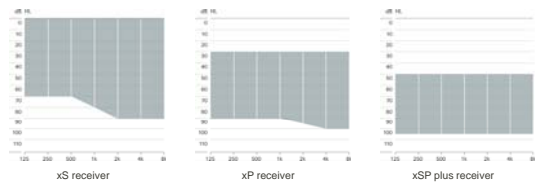
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**Fitting ranges for all Audéo V**



- Same great receivers, domes, SlimTips and cShells



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<p><b>90 – Premium</b></p> <ul style="list-style-type: none"> <li>• Speech in Car</li> <li>• Speech in Loud Noise *</li> <li>• Comfort in Echo</li> <li>• Music</li> <li>• Comfort in Noise</li> <li>• Speech in Noise</li> <li>• Calm Situation</li> <li>• Speech in Wind *</li> <li>• Speech in 360° *</li> <li>• EchoBlock</li> <li>• WindBlock</li> <li>• SoundRelax</li> <li>• SNR-Boost</li> <li>• FlexControl</li> <li>• Flex Volume</li> <li>• DuoPhone *</li> <li>• Real Ear Sound</li> <li>• WindBlock</li> <li>• NoiseBlock</li> <li>• SoundRecover</li> <li>• Tinnitus Balance</li> <li>• auto Acclimatization</li> <li>• UltraZoom Premium</li> <li>• User Preference Tuning</li> <li>• 12 channels</li> <li>• WCP compatible</li> </ul>	<p><b>70 – Advanced</b></p> <ul style="list-style-type: none"> <li>• Music</li> <li>• Comfort in Noise</li> <li>• Speech in Noise</li> <li>• Calm Situation</li> <li>• Speech in Loud Noise *</li> <li>• WindBlock</li> <li>• SoundRelax</li> <li>• SNR-Boost</li> <li>• FlexControl</li> <li>• Flex Volume</li> <li>• DuoPhone *</li> <li>• Real Ear Sound</li> <li>• WindBlock</li> <li>• NoiseBlock</li> <li>• SoundRecover</li> <li>• Tinnitus Balance</li> <li>• auto Acclimatization</li> <li>• UltraZoom Advanced</li> <li>• User Preference Tuning</li> <li>• 16 channels</li> <li>• WCP compatible</li> </ul>	<p><b>50 – Standard</b></p> <ul style="list-style-type: none"> <li>• Comfort in Noise</li> <li>• Speech in Noise</li> <li>• Calm Situation</li> <li>• SNR-Boost</li> <li>• FlexControl</li> <li>• Flex Volume</li> <li>• DuoPhone *</li> <li>• Real Ear Sound</li> <li>• WindBlock</li> <li>• NoiseBlock</li> <li>• QuickSync</li> <li>• SoundRecover</li> <li>• Tinnitus Balance</li> <li>• auto Acclimatization</li> <li>• UltraZoom Standard</li> <li>• User Preference Tuning</li> <li>• 12 channels</li> <li>• WCP compatible</li> </ul>	<p><b>30 – Essential</b></p> <ul style="list-style-type: none"> <li>• Speech in Noise</li> <li>• Calm Situation</li> <li>• WindBlock</li> <li>• NoiseBlock</li> <li>• QuickSync</li> <li>• SoundRecover</li> <li>• Tinnitus Balance</li> <li>• auto Acclimatization</li> <li>• User Preference Tuning</li> <li>• 6 channels</li> <li>• WCP compatible</li> </ul>	<p><b>* Binaural VoiceStream Technology™</b> Available with bilateral fittings</p> <p><b>AutoSense OS</b></p>
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## Venture Chip – Power Consumption

Power savings in a loud listening situation (vs. Quest)

Party Scene (75-80 dB SPL)	Hearing loss/ Receiver	Audéo Q 312T (Naida Q-RIC)	Audéo V 312	Difference
AutoSense OS (no BVST)	Moderate – <b>xS</b>	1.9 mA	1.5 mA	-21%
	Mod/Severe – <b>xP</b>	1.9 mA	1.7 mA	-11%
	Severe – <b>xSP plus</b>	2.8 mA	1.9 mA	-32%
Speech in Loud Noise	Moderate – <b>xS</b>	4.5 mA	3.2 mA	-29%
	Mod/Severe – <b>xP</b>	4.5 mA	3.4 mA	-24%
	Severe – <b>xSP plus</b>	5.4 mA	3.6 mA	-33%

Current consumption in "Mute"

- Almost all functionality switched off: approx. 0.5mA

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## Audéo V

	Phonak Audéo V-10	Phonak Audéo V-312	Phonak Audéo V-312T	Phonak Audéo V-13
<b>All new designs</b>				
<b>New High Tech Composite Housing</b>				
Binaural VoiceStream Technology™	*	*	*	*
Wireless programming	*	*	*	*
Wired programming	*	*	*	*
T-Coil	*	*	*	*
Push Button	*	*	*	*
Volume Control	*	*	*	*
Direct Audio Input	*	*	*	*
AS18	*	*	*	*
Roger 18	*	*	*	*
xS Receiver	*	*	*	*
xP Receiver	*	*	*	*
xSP plus Receiver	*	*	*	*

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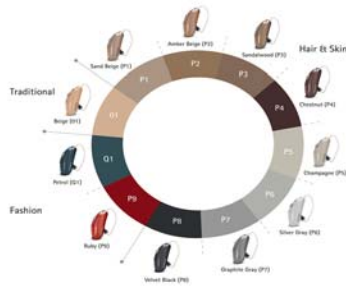
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## Colors



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The new user guide and hard case



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The Phonak Wireless Communication Portfolio

The new wireless accessories for Venture and beyond



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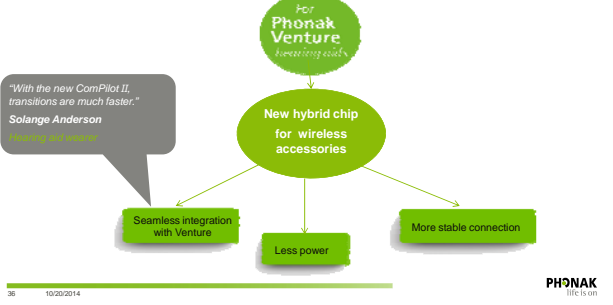
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Why a new generation?



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Overview of the Phonak Wireless Communication Portfolio

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Phonak EasyCall

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Phonak EasyCall

- The universal cell phone streamer
- Connects to **ANY** Bluetooth-enabled phone
  - including non-smartphones
- 2 versions:
  - EasyCall II for Venture
  - EasyCall for Spice+ / Quest
- Available early 2015

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ComPilot Air II



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ComPilot Air II

- The clip-on audio streamer
- Neckloop-free design
- For Bluetooth connectivity
- Simple hearing aid remote control
- RemoteControl App compatible
- Direct dial preferred number feature
- 4 Hour streaming time



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Phonak ComPilot II



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### Great new features!

- Multi-purpose streamer
- Integrated instant streaming demonstration capability
- "Directly call a preferred number" feature
- 24 hours streaming time
- Volume control long press for hearing instrument microphone attenuation
- Supports two phones in parallel while connected to TVLink II or RemoteMic
- RemoteControl App compatible



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### ComPilot II and ComPilot Air II comparison



or



- 24 hours streaming time
  - Directional microphones
  - 3.5 mm and FM/Roger receivers inputs
  - Home button
- TV , phone & music oriented

- No neck loop
  - Around 4 hours streaming time
  - Focus only on Bluetooth
- Phone & TV oriented

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### Phonak DECT II



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### Introducing Phonak DECT II

- Easy to operate, set-up and use
- Instantly demonstrate the benefits of hearing in both ears
- Optimal (40% more) speech understanding on the phone
- Binaural transmission of the sound simultaneously to both ears
- Reduced noise and maximum understanding



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### Phonak TVLink II



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### The new TVLink II basestation

- Input signal automatically selected
  - Optical ("Toslink")
  - Digital Coaxial ("SPDIF")
  - Analog
- HDMI is not supported
- Fully backward compatible to current ComPilot



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Listening over distance – RemoteMic v2.0



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The Phonak RemoteMic v2.0

- ComPilot, ComPilot II and ComPilot Air II compatible
- New default volume level 8 (previously 11)
- Ideal for a distant speaker over large distance up to 20 m (60 ft)



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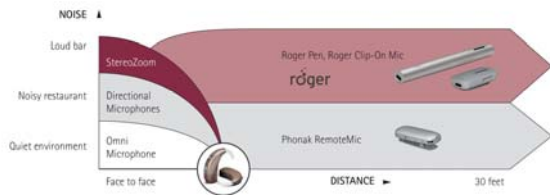
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Communication over distance



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Roger röger

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Roger 18 receiver

- Compatible with Audéo V-13
- Available early 2015

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Phonak RemoteControl App For Phonak Venture hearing aids

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### How does it work?

- No direct fitting required
- Automatically gets information from the streamer

Pair of Phonak Venture hearing aids + Phonak ComPilot II or Phonak ComPilot Air II → Smartphone

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### Phonak PilotOne II

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### Phonak PilotOne II

- Adjusts volume and program settings of Phonak hearing aids
- Four large and easy-to-push buttons
- Uses a standard AAA alkaline battery

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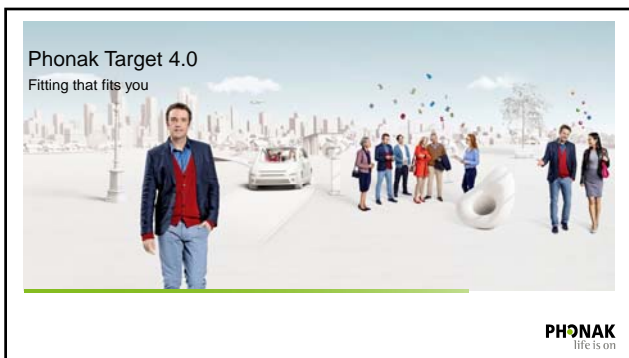
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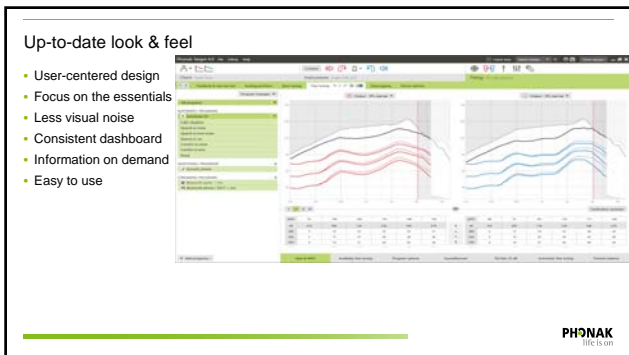
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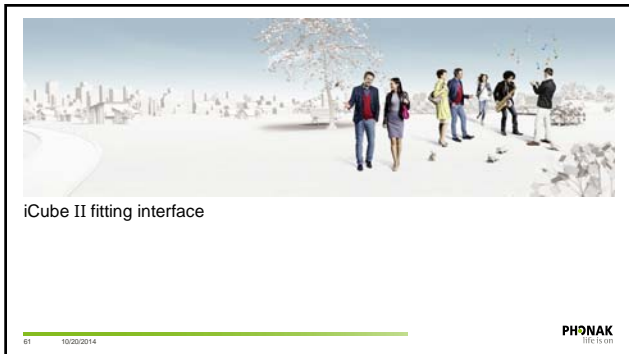
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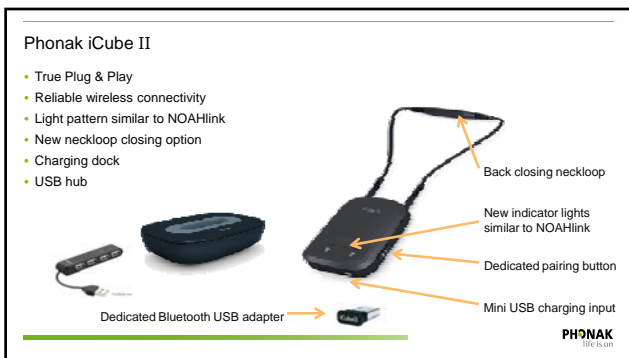
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Phonak iCube II compatibility

iCube II is compatible to all wireless hearing instruments fit in Phonak Target

	Venture	Quest	Spice+	CORE (iPFG)
iCube II	✓	✓	✓	-
iCube	-	✓	✓	✓

Please note:

- Audéo V-10 can only be fit wirelessly
- Switch off all wireless accessories while using the iCube II

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