



Introducing

## Early Access to sound with the new Ponto Softband

Rebecca Cihocki Au.D.



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## The Ponto System

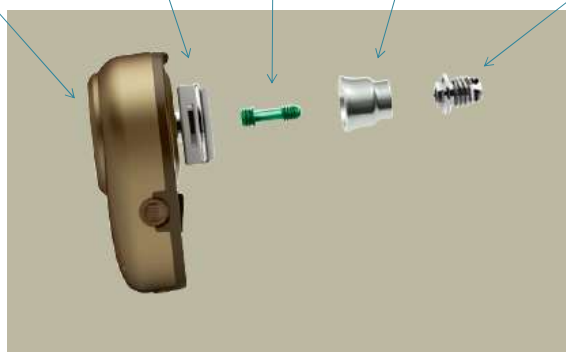


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## The product 'Oticon Ponto' .....what's in it ?

Sound processor    Coupling    Screw    Abutment    Ti-Implant

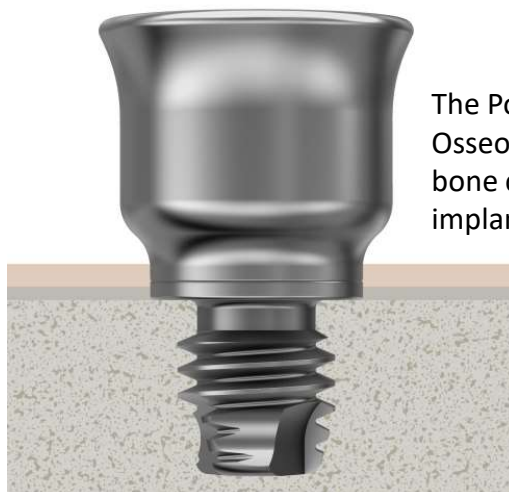


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## What exactly are we making?

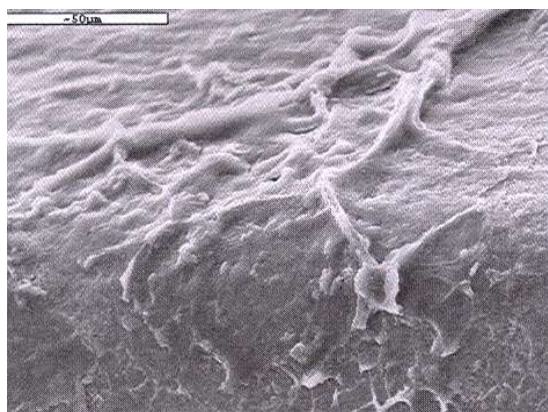


The Ponto is an  
Osseointegrated  
bone conduction  
implant system

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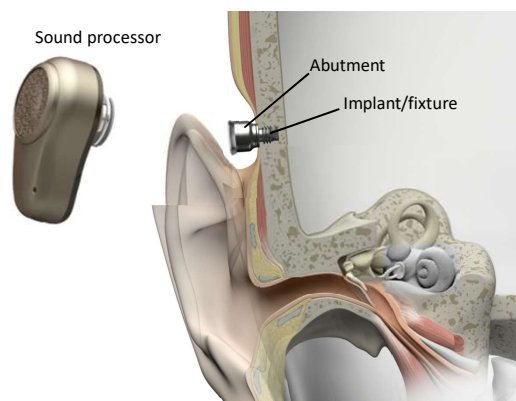
## Osseointegration



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## Oticon Medical: Ponto Bone Anchored System

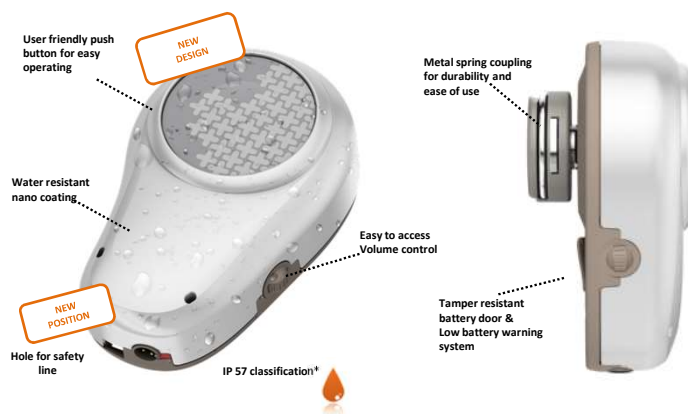


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## Durable, Reliable & Easy to Operate: Made for Living

- Designed and tested for an active lifestyle.
- With IP57 classification against moisture and dirt – the highest in its class\*



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\* Please note, Ponto Plus is not waterproof. Users should always remove their sound processor while showering or bathing

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## Designed for Children – Safety, Robustness and Reliability

- Transducer Impact Protection
- Temper Proof Battery Drawer
- Safety Line
- Nano Coating : protects from moisture and dirt



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**The Next Step in the Evolution:  
Minimally Invasive Ponto Surgery (MIPS)**

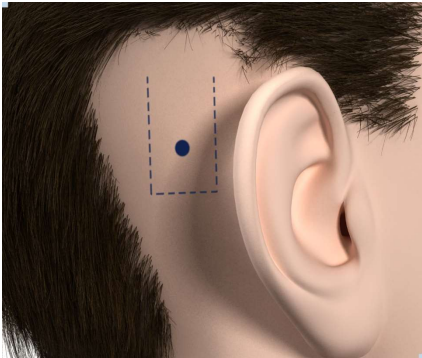
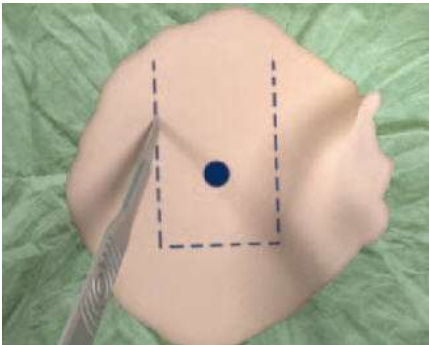


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**Ponto Surgery with Dermatome**

**Surgical Procedure One stage (adults and older children)**

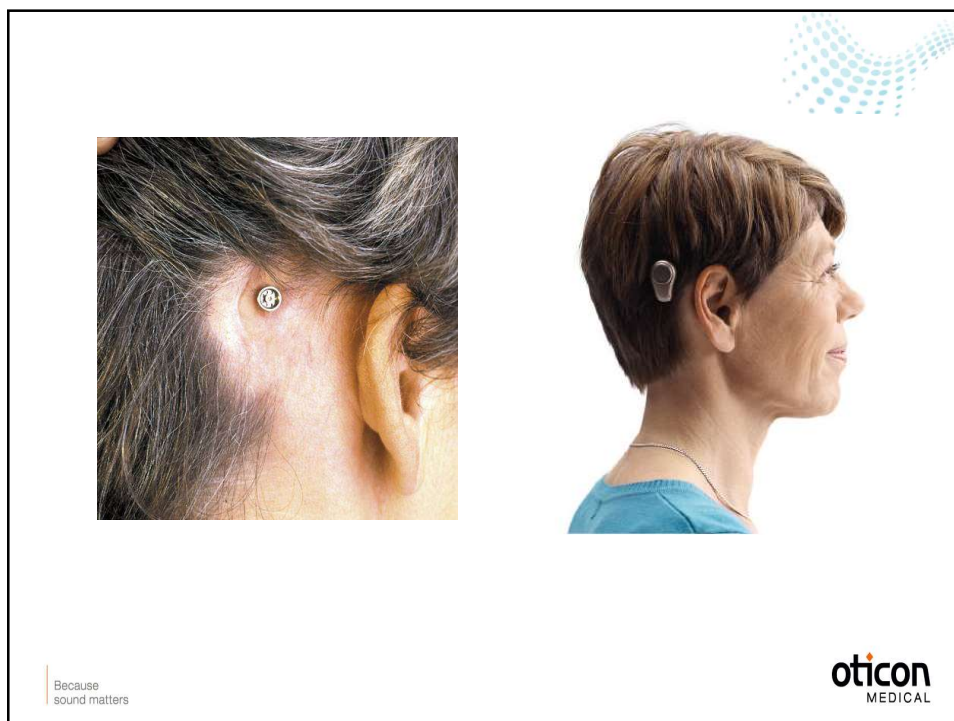



Implant site is prepared to determine flap dimensions and implant placement

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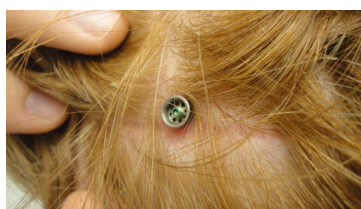
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## Surgery -- minimally invasive outcome





- ✓ 3 months post-op
- ✓ No divot
- ✓ Hair bearing skin



Advances in Bone Anchored Hearing and the Ponto System

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## MIPS



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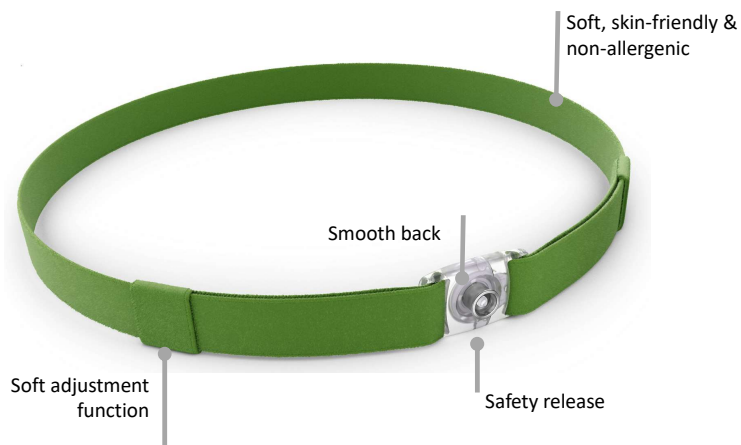
## Available Softband Solutions



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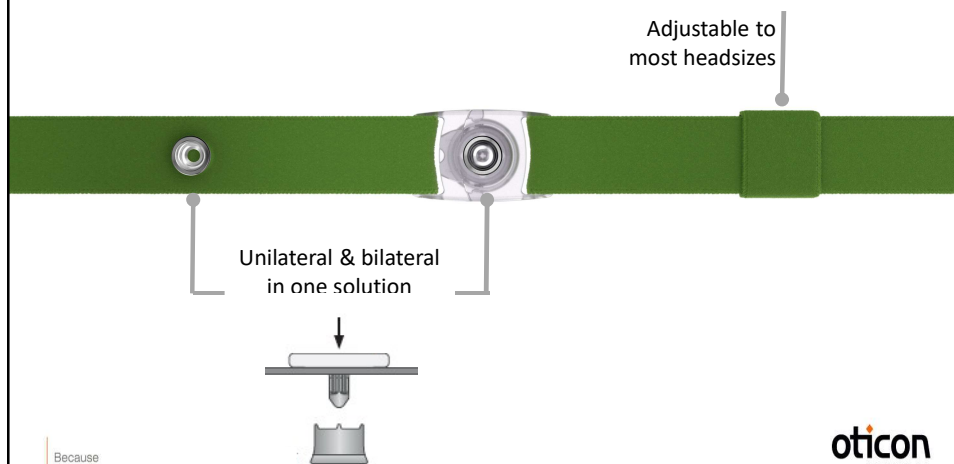
## Comfortable & Safe to Wear



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## Flexible – for different needs



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## New Wearing Option

- Ponto SoundConnector™
- For cap of headwear



- Tamperproof
- Reassuring "click-sound"
- Also sold as single item



## CANDIDACY

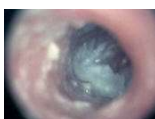


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## Candidates for a bone anchored solution

1. Conductive/mix  
loss due to cronic otitis



2. Conductive/mix  
loss due to atresia



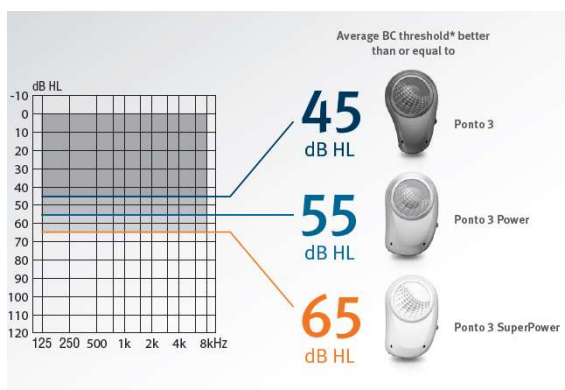
3. Unilateral  
(single sided) loss



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## Ponto 3 Introduces an Increased Fitting Range



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FDA cleared

## Patient Indications – Fluctuating Hearing Loss

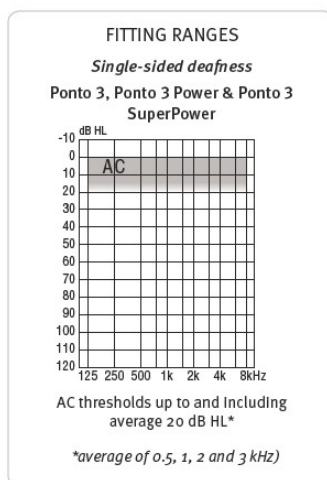
- **Children with chronic ear infections, Down's Syndrome, ETD etc.**
- **Softband**
  - Non surgical option with children who should eventually grow out of middle ear problems that create the fluctuating hearing loss
- **Benefits:**
  - No risk of over amplification if wearing on days when hearing is normal
  - Ear canal remains open – small canal, wax, drainage does not affect function
  - Hearing is constant. The amount of fluctuation is all related to the middle ear and Ponto on softband overcomes any middle ear issue



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## Ponto Candidacy- SSD



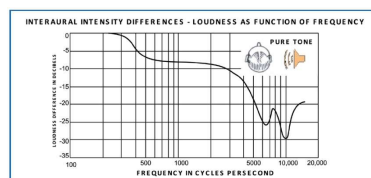
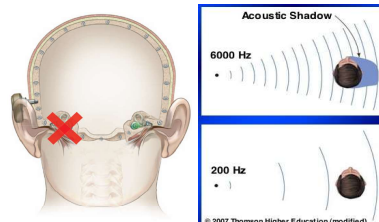
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## What do SSD Patients Need? Emphasis on HF Amplification

- The goal is to lift the head shadow effect:

- The head shadow effect exists above 1500Hz, therefore only high frequencies need to be amplified
- Amplifying the low frequencies might disturb the natural hearing of the contralateral ear, leading to poorer hearing in background noise

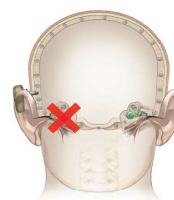
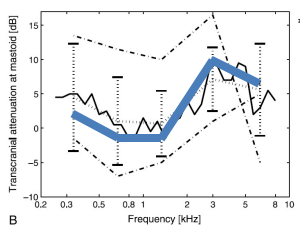


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## Ponto for SSD patients Emphasize HF amplification

- The skull dampens vibrations as a result of transcranial attenuation (~10dB at 3kHz)



\* Stenfelt (2012) Transcranial attenuation of bone-conducted sound when stimulation is at the mastoid and at the bone conduction hearing aid position. *Otology & Neurotology* 33; 105-114

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## Ponto 3 – The Definition of Power

The most powerful family of abutment-level sound processors



**Ponto 3**  
45 dB HL



**Ponto 3 Power**  
55 dB HL



**Ponto 3 SuperPower**  
65 dB HL

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**Output**



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## Committed to Bring Higher Output

Objective measurement of the MPO of several hearing devices

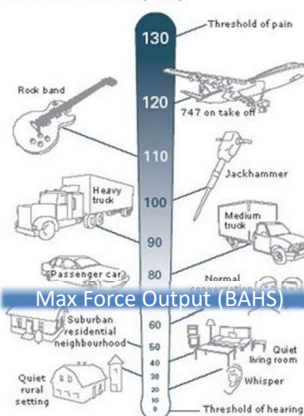
Device	Measured MPO	Reference
Sophono Alpha 1	56 dB HL	Hol et al., 2013
Bonebridge	65 dB HL	Mertens et al, 2014
Standard Baha Divino / BP100	67-69 dB HL	Carlsson & Hakansson, 1997 Zwartenkot et al. 2014
Ponto Pro	67-69 dB HL	Zwartenkot et al. 2014
Baha Cordelle	80 dB HL	Zwartenkot et al. 2014

[http:// www.snkimplants.nl](http://www.snkimplants.nl)



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### DECIBEL SCALE (dBA)



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## Committed to bring higher output

### DECIBEL SCALE (dBA)

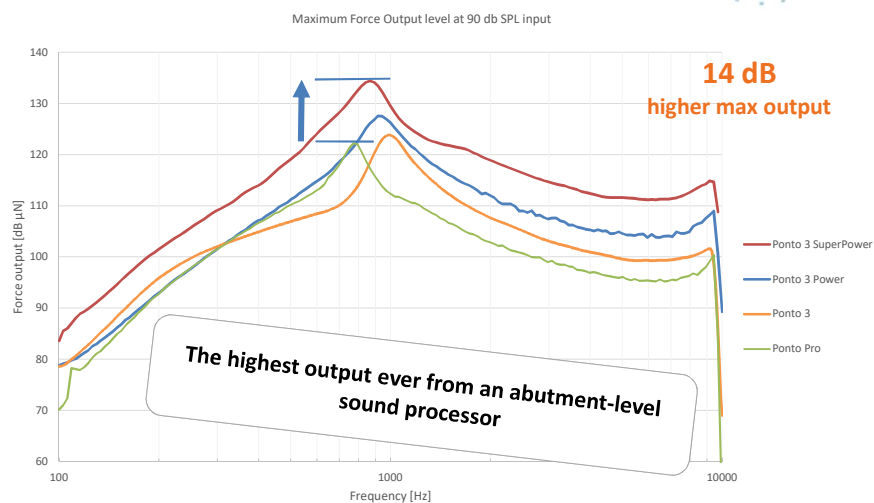


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## Ponto 3 SuperPower



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## Bandwidth

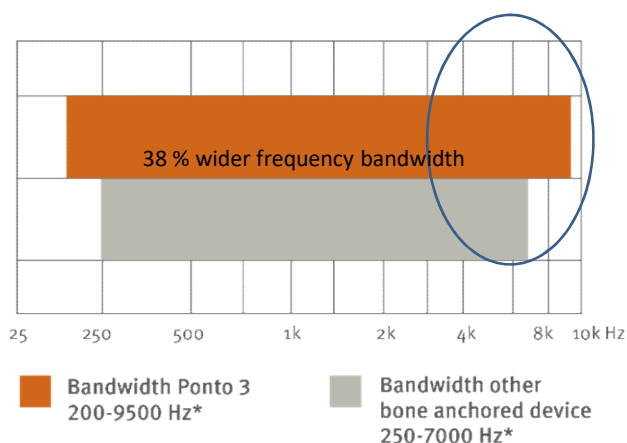


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## Ponto 3: Industry's Widest Bandwidth

38 % wider frequency bandwidth



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*\*Linear comparison of equivalent bone anchored sound processors.  
The perceptual performance has not been evaluated.*

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## The Importance of High Frequency

- Task: Learn 5 new words
- 2 groups of children,
  - one listened to limited bandwidth -> 4.6kHz
  - the other listened to extended bandwidth -> 9 kHz
- Research question:  
How many trials do they need to be able to pair the word and picture correct?

- Sothnud
- Doztul
- Fosnush
- Stomun
- Homtul



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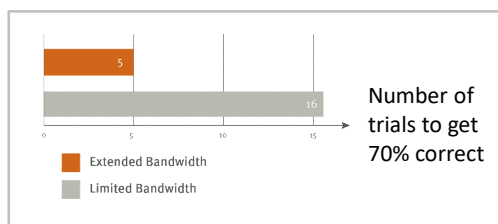
Pittman (2008) Short-term word-learning rate in children with normal hearing and children with hearing loss in limited and extended high-frequency bandwidths. Journal of Speech, Language and Hearing Research. Vol5; 785-797

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## The Importance of Extended Bandwidth

Results:

Children **learn** new words **3 times quicker**  
**with extended bandwidth**  
compared to the children  
who listen to limited bandwidth.



Pittman (2008) Short-term word-learning rate in children with normal hearing and children with hearing loss in limited and extended high-frequency bandwidths. Journal of Speech, Language and Hearing Research. Vol5; 785-797

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*\*The study included both normal hearing and hearing impaired children who were exposed to limited and extended bandwidth. No conclusion can be drawn from this study with regards to Ponto 3.*

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**Clarity**



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## Ponto Directionality

Omni directional

Split directional

Full directional

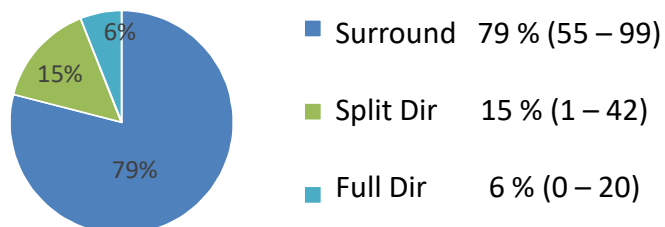


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## Automatic Directionality Distribution As recorded for 19 individuals

Directional modes  
distribution



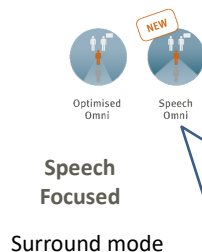
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## FreeFocus Modes

Front

Back



**Speech Focused** is a light directional mode that has a high frequency cut-off between directional and omnidirectional at 1880 Hz.

This keeps the lower frequencies omnidirectional, allowing environmental input from all directions, and high frequencies in a more directional mode to enhance focus on the source of interest when positioned in front of the listener.

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## FreeFocus Directionality System

- FreeFocus:
  - **15%** better speech understanding with Speech Focused mode.
  - A typical user spends more than **70%** of the time in Speech Focused mode. This brings users significantly better speech understanding in the majority of everyday listening situations.



Present in all Ponto 3 devices



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FreeFocus feature test report (2016), Oticon Medical report no 34425-00

**Power to Participate**  
Wireless Accessories, Reliability, and Product Features

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**Ponto 3 – Power to participate**  
Wireless power

- Wireless connectivity that does not compromise on power

Download on the  
App Store

GET IT ON  
Google Play

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## Ponto Streamer Fitting

### • Ponto Streamer

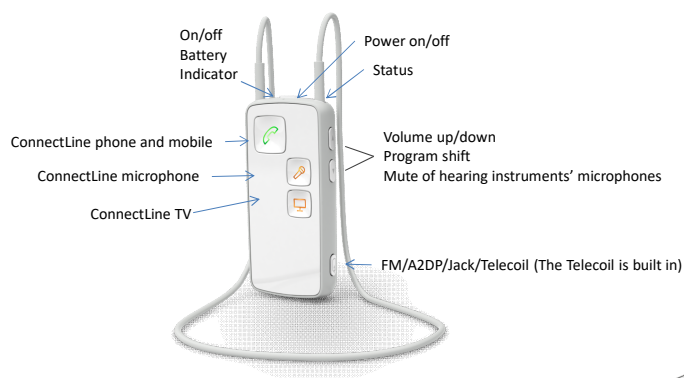
- Works out of the box with any Ponto3
- Wide selection of FM receiver options
- Battery usage in the sound processor is preserved
- If more than one Ponto user in room, use Genie Medical to link Streamer to just one Ponto3
- If linked – Streamer can be used without the Neckloop



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## Ponto Streamer



Battery charge (micro USB)

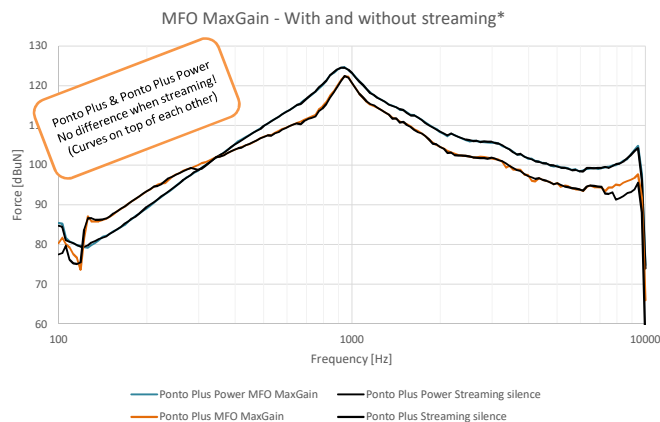
FM plug

Minijack 3.5 mm

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## Ponto Plus - Wireless possibilities does not affect the power users need!

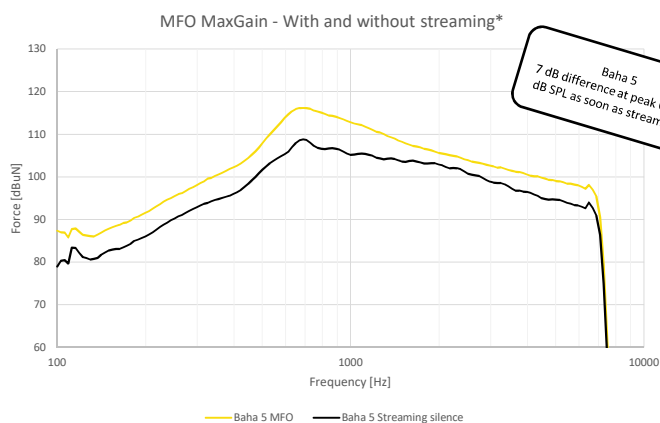


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\*The MaxGain (max audiology gain) setting was used for all devices during testing - with and without iPhone audio streaming link active - The MFO MaxGain curves shows results without actively streaming a sound file through the wireless link. The Streaming Silence curves show the results when streaming an empty (zero's) sound file from the iPhone during the MFO measurement. This shows how the wireless link itself influences the MFO.

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## Wireless possibilities should never compromise on the Power which users need!



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\*The MaxGain (max audiology gain) setting was used for all devices during testing - with and without iPhone audio streaming link active - The MFO MaxGain curves shows results without actively streaming a sound file through the wireless link. The Streaming Silence curves show the results when streaming an empty (zero's) sound file from the iPhone during the MFO measurement. This shows how the wireless link itself influences the MFO.

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3 4 2 0 2 - 0 0

## Bimodal Use of Oticon Medical Streamer



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### Which Oticon hearing aids can be used in a bimodal setup?

- Currently, there are six models that can be used bimodally with OM Streamer:

- Dynamo:**

- Dynamo SP4
- Dynamo SP6
- Dynamo SP8
- Dynamo SP10



- Sensei SP:**






- Sensei SP
- Sensei SP Pro



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## Which Streamer can I use bimodally?

	<b>Oticon Medical Streamer</b> 	<b>Ponto Streamer</b> 	<b>Streamer Pro</b> 
<b>How does it come out of the box?</b>	Always open, with the possibility to be linked	Always open, with the possibility to be linked	Two versions: One always linked, one open with the possibility to be linked. Availability depends upon country.
	✓	✓	✗
	✓ Only with selected hearing aids*	✓ Only with selected hearing aids*	✓

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\* Dynamo (Dynamo SP4, Dynamo SP6, Dynamo SP8 and Dynamo SP10)  
Sensei SP (Sensei SP and Sensei SP Pro)

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## Empowering children

New Softband and DSL-BC



## The new Ponto Softband

Designed to stand up for high activity levels,  
be comfortable to wear and  
still meet the high standards of safety.



### Widest color option

- Choose between 14 different colors!



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## New skins and stickers!



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## Verify you have the Service Pack installed



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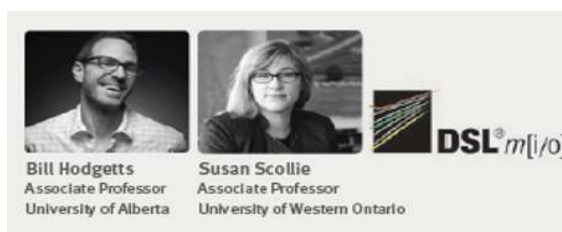
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## First-ever DSL-BC

The well-known **DSL** fitting rationale  
is now **taylor-made for BAHS**,  
called DSL-BC.

For the **first time ever**  
implemented in BAHS !



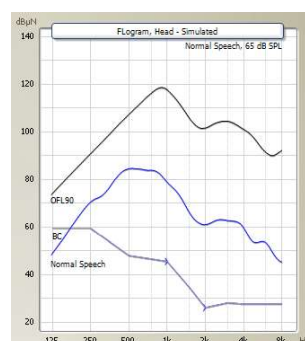
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## DSL-BC for BAHS

- Build on DSL v5.0 m[i/o] concept:  
Map the natural dynamic range to the patient's dynamic range (residual auditory area).
- Input parameters to DSL-BC:
  - BC In-situ hearing threshold
  - Sound processors' MFO
  - RHCD (Real Head to Coupler Differences)
- - determines the patients' Dynamic Range
- And the amplification is prescribed

*Product specific information already in Genie Medical*



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## DSL-BC

- Accessible in all Ponto devices!

- Ponto Pro
- Ponto Plus
- Ponto 3



- First-ever DSL-BC in BAHS fitting software!!



Clinical support tools

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## Ponto & FM



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## Connecting to FM

- How to connect FM receivers to the different Oticon Medical SP's



- Ponto / Ponto Pro (where it's connected directly to the sound processor)

compared to



- Ponto Plus/ Ponto 3 (where it's connected through Ponto Streamer)

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## Connecting an FM receiver to Ponto / Ponto Pro

On **Ponto / Ponto Pro / Ponto Pro Power** you attach the FM receiver directly to the sound processor through the DAI socket in the sound processor itself. The FM plug used for Ponto / Ponto Pro / Ponto Pro Power looks like this:



FM receivers which can be used together with Ponto, Ponto Pro and Ponto Pro Power are:

- Oticon Amigo R2BA
- Phonak MLxi BAHA (no longer commercially available)
- Phonak MLxS BAHA (no longer commercially available)

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### Add FM program via Genie



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### Lock Ponto Pro into FM+M



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## Connecting an FM receiver to Ponto Plus & P 3's

On **Ponto Plus/ Ponto Plus Power/P3s** there isn't a connection socket on the sound processor. Instead you connect it through the connection socket in the bottom of the Ponto Streamer. The FM plug used for Ponto Streamer looks like this:



Known FM receivers which can be used together with Ponto Plus and Ponto Plus Power are:

- Oticon Amigo R2 & Oticon Amigo R1
- Phonak MLxi universal receiver & Phonak Roger X universal receiver (no longer commercially available)
- Widex universal receiver
- Comfort Audio DT-20

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Ponto Pro / Pro Power	Ponto Plus / Plus Power/ Ponto 3's
Chip same as in Oticon Agil	Chip same as in Oticon Alta / Safari (plus) Chip same as in Oticon Alta Pro/ Sensi (3's)
Wireless - no	Wireless – yes (Streamer)
FM – DAI prongs at bottom of Ponto	FM – DAI at bottom of Streamer
FM – requires audiologist to program FM+M program	FM- short press of AUX button on Streamer
T-Coil – must be purchased as accessory. Add DAI program and push memory button	T-coil –integrated into Streamer. Long press of AUX button on Streamer
Audio Adaptor – must be purchased separately and add DAI program and push MB	Audio adaptor – jack included with Streamer, or option to Bluetooth
FM receiver options – Oticon R2BA or Phonak “Baha” FM	FM receiver options- any Europin receiver including Oticon amigo, Phonak Rogerx, Comfort Audio, widex etc..

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## Audio adaptor and T-coil for Ponto Pro / Pro Power



The Oticon Medical Audio Adapter



The Oticon Medical Telecoil

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## Troubleshooting FM with any Ponto Plus or Ponto 3



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## Troubleshooting FM with Ponto or Ponto Pro

- The audiologist must define a FM/FM+M program in Ponto
  - In the Program Manager in Genie Medical, add the program FM or/and FM+M.
- The patient should:
  - connect the FM receiver to the Ponto sound processor
  - turn On the receiver switch (see table below for instructions)
  - press the push button on Ponto to change between programs



The Ponto system with ear level FM receivers

Receivers	Oticon Amigo R2 BA	Phonak MLxS BAHA	Phonak MLxi BAHA
			
Switch on Receiver	3 positions  On On Off	3 positions  Off/On/On	2 positions  Off/On

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## Fitting Ponto 3

News in Genie Medical 2016.1

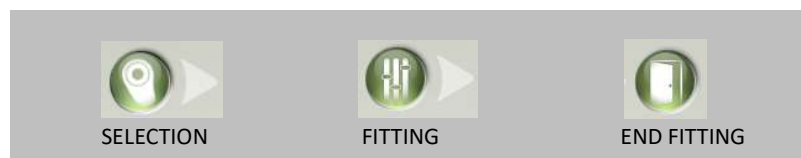


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## Genie Medical 2016.1 Release Overview

### Product Introduction and Features



- Ponto 3 family
- DSL-BC fitting rationale
- FLogram
- FreeFocus
- Binaural Synchronization
- Fitting Assistant
- Binaural Coordination

#### Additional features:

- Softband fitting prescription is updated
- Recommend fitting flow is updated

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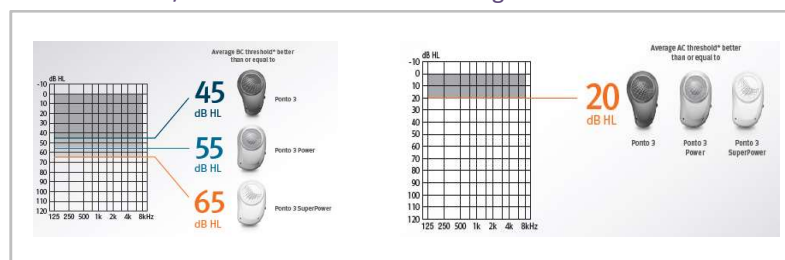
## Ponto 3 Family of Processors

- Ponto 3
- Ponto 3 Power
- Ponto 3 SuperPower

### Fitting range

Conductive / mixed HL

Single-Sided Deafness

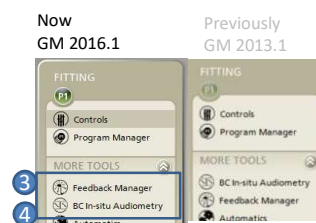


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## Recommended Fitting Flow

1. Detect sound processor
2. Select type of fitting:
  - Single-sided deafness
  - Softband
3. Measure Feedback limit
4. Measure BC In-situ



The order is changed:  
run the Feedback Manager  
before BC In-situ.

Out-of-Box Oticon Medical Streamer  
(don't need to do anything in Genie Medical)

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## DSL-BC Fitting Rationale

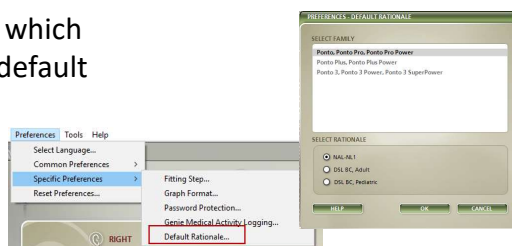
- DSL-BC available in all Ponto devices:

- Ponto Pro
- Ponto Plus
- Ponto 3



- Preferences

Audiologists can choose which  
rationale should be the default

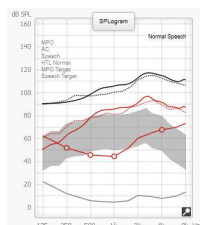


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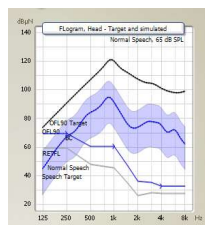
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## FLogram in Genie Medical

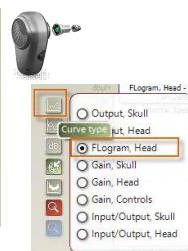
- FLogram is for bone anchored devices what SPLogram is for AC hearing aids



Sound pressure level  
(dB SPL) at ear drum



Force level (dBμN) at  
abutment on head



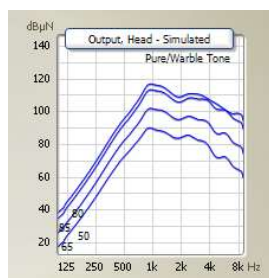
- FLogram is a graph option; the setting of the sound processor is the same no matter which graph is selected.

Because  
sound matters

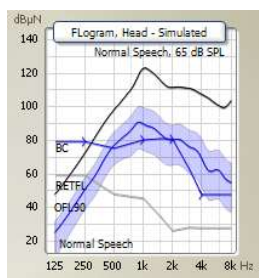
oticon  
MEDICAL

## Different views

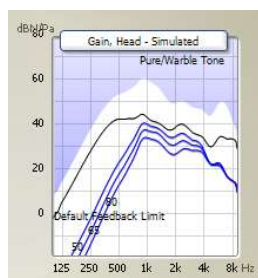
Output



Flogram



Gain

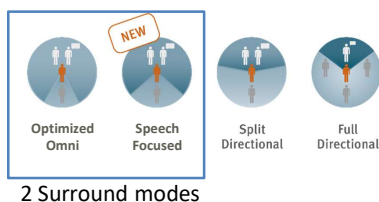


Because  
sound matters

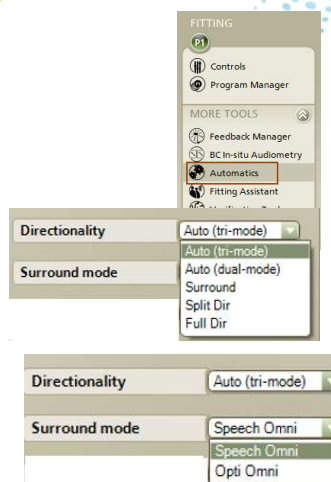
oticon  
MEDICAL

## FreeFocus

- Four FreeFocus modes:



- 2 Surround modes:
  - Speech Focused - default
  - Select Optimized Omni for patients who require increased loudness.

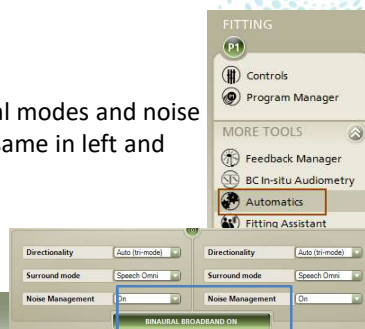
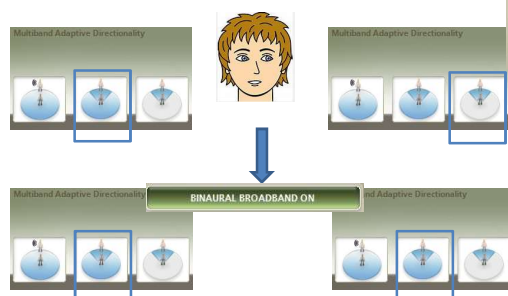


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## Binaural Synchronization

- 'Binaural Broadband' ensures that Directional modes and noise reduction states are synchronized to be the same in left and right devices.

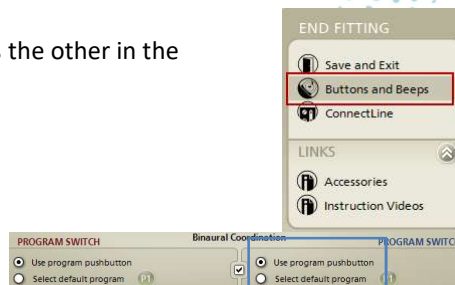
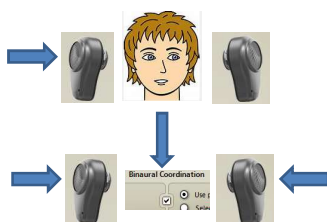


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## Binaural Coordination

- The operation of one device affects the other in the same way



- Volume control
- Changing program
- Muting the device

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## Fitting Assistant

- A new tool to easily fine tune the sound processor
- Generally little need for fine tuning, but, if needed, likely the controls can provide 'guidance'.
- The controls are designed specifically for the challenges in BAHs prescriptions and fittings.



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## Fitting children on Softband

- Select softband option



- Change directionality



- Change surround



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## Fitting children / students



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## Ponto 3 – The Definition of Power



45 dB HL

55 dB HL

65 dB HL



### Powerful sound quality

- Highest output ever from an abutment level soundprocessor
  - Widest frequency bandwidth
- 15% better speech understanding in 70% of time

### Power to participate

- Wireless power
- Reliable performance

### Empowering children

- First ever DSL-BC
- New Ponto Softband

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# QUESTIONS?

Thank you for your time

Q & A

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