# Genie Medical Fitting Guide

## Ponto™ – The Bone Anchored Hearing System

Ponto 3  •  Ponto 3 Power  •  Ponto 3 SuperPower
Ponto Plus  •  Ponto Plus Power  •  Ponto  •  Ponto Pro
Ponto Pro Power  •  Oticon Medical Streamer  •  Ponto Streamer

oticon
MEDICAL

# Sound Processor Features

| Features | Ponto 3<br>Ponto 3 Power<br>Ponto 3 SuperPower | Ponto Plus<br>Ponto Plus Power | Ponto Pro<br>Ponto Pro Power | Ponto |
|---|---|---|---|---|
| **Sound processing features** | | | | |
| 15 sound processing channels | ✓ | ✓ | ✓ | ✓ |
| Multiband Adaptive Directionality | Automatic | Automatic | Automatic | Manual |
| FreeFocus | ✓ | | | |
| Tri-state Noise Reduction | ✓ | ✓ | ✓ | |
| Wind Noise Reduction | ✓ | ✓ | ✓ | ✓ |
| Dynamic Feedback Cancellation (DFC) | ✓ | ✓ | ✓ | ✓ |
| Feedback shield | Inium Sense | Inium | | |
| Speech Guard | ✓ | ✓ | ✓ | ✓ |
| Learning Volume Control | ✓ | ✓ | ✓ | |
| Binaural processing | ✓ | | | |
| **Fitting features** | | | | |
| BC In-situ Audiometry | ✓ | ✓ | ✓ | ✓ |
| Feedback Manager | ✓ | ✓ | ✓ | ✓ |
| Verification tool | ✓ | ✓ | ✓ | ✓ |
| Data Logging | ✓ | ✓ | ✓ | |
| Oticon Medical Streamer Settings tool | ✓ | ✓ | | |
| **The physical product and accessories** | | | | |
| Wireless capabilities | ✓ | ✓ | | |
| OM Streamer incl. T-coil & FM input | ✓ | ✓ | | |
| Up to 4 programs | ✓ | ✓ | ✓ | ✓ |
| Start-up delay and Low battery warning | ✓ | ✓ | ✓ | ✓ |
| Telecoil/DAI/FM input | | | ✓ | ✓ |

# Contents

# Fitting Guide (1/2)

**Selection**



**Fitting**
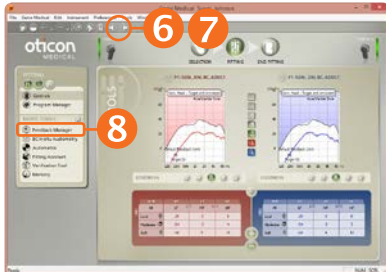


**Feedback Manager**



**How to program a Ponto instrument**

1. Insert a battery in the instrument.

2. Connect the instrument.

3. **Select instrument:** Click Detect and Continue.

4. **Type of Fitting**
   - Single-sided deafness: If the instrument is fitted to stimulate the cochlea on the other side, check the box for Single-sided deafness.
   - Soft band: If the instrument is fitted on soft band, head band or test band, check the box for Soft band.

5. Click Fitting step.
   In the 'Choose setting' dialog, select Genie Medical.

6. Mute the instrument.
   Put the instrument on the client's abutment.

7. Click to un-mute the instrument.

8. Click **Feedback Manager.**

9. Click Start to measure the individual feedback limit.

10. Click **BC In-situ Audiometry.**
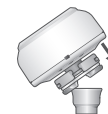
# Fitting Guide (2/2)

**BC In-situ Audiometry**
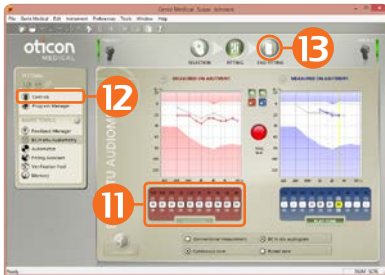


11. Conduct the BC In-situ measurement.

12. Click Controls and evaluate the setting and, if necessary, adjust the controls.

13. Click End Fitting step.

**End Fitting**



14. Click Save, Program and Exit.

Oticon Medical Streamer comes OPEN, meaning that it works directly out of the box with the wireless Ponto sound processor.

# Linking an Oticon Medical Streamer (optional)

**End Fitting**



1. Select Streamer in End Fitting step
2. Click ConnectLine

**ConnectLine**



3. Click Settings
4. Connect the Streamer to the PC

**Ponto Streamer Settings**



5. Select Linked
6. Close Oticon Medical Streamer Settings
7. Click End Fitting step

8. Enter the Oticon Medical Streamer serial number by either:
   **Using HI-PRO:**
   Enter the serial number manually. It can be found on the bottom of the Streamer or on the Oticon Medical Streamer box.
   **Using NOAHlink or EXPRESSlink:**
   Place the Streamer close to the wireless Ponto sound processor, and click 'READ SERIAL NUMBER'.

**End Fitting**



9. Click Save, Program and Exit

# Oticon Medical Streamer

The Oticon Medical Streamer can wirelessly connect wireless Ponto sound processors to different audio sources, such as mobile, TV or computer. The Oticon Medical Streamer also works as a remote control.

## Oticon Medical Streamer works out of the box

Oticon Medical Streamer works out of the box with any wireless Ponto sound processor without being linked to the fitted instrument(s).

| Open Oticon Medical Streamer (as it comes from factory) | Linked Oticon Medical Streamer (see page 6) |
|---|---|
| Sends signals to wireless Ponto sound processors within approx 1 m. | Sends signals only to the fitted instrument(s). |
| Wear with the neckloop. | Wear with or without the neckloop. |

Pairing Oticon Medical Streamer and cell phone: The pin code for the Streamer is 0000 (four zeros).

The remote functionality of the Oticon Medical Streamer can be customized in the Oticon Medical Streamer Setting tool, see page 45.
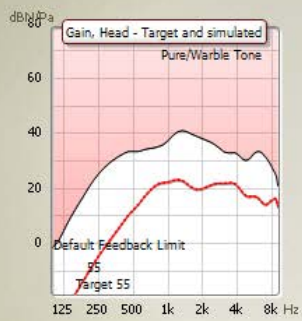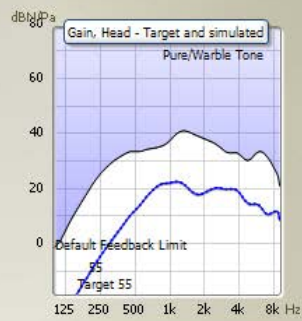
# Introduction to the Genie Medical screen

## The elements on the screen

❶ The Organizer steps will guide you through the fitting process
❷ Program selection
❸ The task pane gives access to tools and links related to where you are in the fitting process
❹ Toolbar
❺ Connection status

PONTO 3

## Connection status

Green: The instrument is connected, and has the setting shown on the screen; the setting is saved in the instrument.

Yellow: The instrument is connected, and has the setting shown on the screen, but the setting is not saved.

Gray: The instrument is not connected.

## The steps in the fitting process

### Selection

- Select instrument and type of fitting:
  - Single-sided deafness or not
  - Fitted on soft band or not

### Fitting

- Measure individual feedback limit
- Conduct BC In-situ Audiometry
- Add or change programs
- Evaluate the instrument setting; fine tune if needed

### End Fitting

- Specify the client's operation of the instrument (e.g. turn off VC)
- Individualize Oticon Medical Streamer and Connect-Line program, see page 43 and 45
- Save the settings to the instrument and Genie Medical

While the instrument is connected to Genie Medical, the pushbutton and volume control are deactivated.

File   Genie Medical   Edit   Instrument   Preferences   Tools   Window   Help

**oticon**
MEDICAL

PONTO 3 POWER

SELECTION   →   FITTING   →   END FITTING

PONTO 3 POWER

**SELECTION**

- Select Instruments
- Program Manager

**LINKS**
- Colour Overview
- Cable Overview
- Accessories
- Instruction Videos

SELECTION

dB HL

BC    0
      20
      40
AC    60
      80
      100
      120

125 250 500  1k  2k  4k  8kHz

BC    0
      20
      40
AC    60
      80
      100
      120

125 250 500  1k  2k  4k  8kHz

**DETECT**

| STYLE | FEATURES | | STYLE | FEATURES |
|---|---|---|---|---|
| None | Volume Control ☑ | | None | Volume Control ☑ |
| Ponto 3 | Noise Reduction ☑ | | Ponto 3 | Noise Reduction ☑ |
| Ponto 3 P | Logging ☑ | | Ponto 3 P | Logging ☑ |
| Ponto 3 SP | VC Learning ☑ | | Ponto 3 SP | VC Learning ☑ |
| Ponto Plus | DAI ☐ | | Ponto Plus | DAI ☐ |
| Ponto Plus P | Streamer ☑ | | Ponto Plus P | Streamer ☑ |
| Ponto | | | Ponto | |
| | Battery  675 | | | Battery  675 |

☐ Single-sided deafness
☑ Soft band

Single-sided deafness ☐
Soft band ☑

Ready

NUM  SCRL

# Pre-operative Evaluation

## We recommend:
- Fitting the instrument individually to the client, also for the pre-operative demonstration.
- Activating the Soft band box whenever the instrument is fitted on soft band, head band or test band.
- Conducting BC In-situ. See page 25.



**Soft band fitting mode**
Sound (vibration) is damped when passing through skin and tissue. This transcutaneous attenuation varies from person to person, but occurs mainly in the high-frequency area.



Activating the Soft band box ensures that:
- The hearing threshold measured with BC In-situ tool with the instrument on soft band will not be 'reused' when the instrument is fitted on the abutment, as the thres-hold differs for the two measurement conditions.



- The attenuation via skin and tissue is compensated for when the hearing threshold is not measured with the BC In-situ tool.

*Note: An instrument demonstrated on a head band or soft band will not sound the same as when worn on an abutment.*

File   Genie Medical   Edit   Instrument   Preferences   Tools   Window   Help

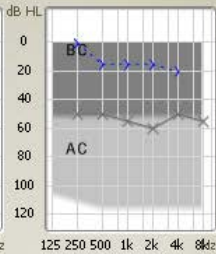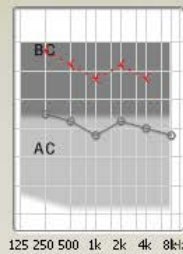**oticon**
MEDICAL

PONTO 3

PONTO 3

SELECTION → FITTING → END FITTING

SELECTION

Select Instruments
Program Manager

LINKS

Colour Overview
Cable Overview
Accessories
Instruction Videos

SELECTION

dB HL

0
20
40
60
80
100
120

BC

AC

125 250 500  1k  2k  4k  8kHz

BC

AC

125 250 500  1k  2k  4k  8kHz

DETECT

| STYLE | FEATURES | | STYLE | FEATURES | |
|---|---|---|---|---|---|
| None | Volume Control | ☑ | None | Volume Control | ☑ |
| **Ponto 3** | Noise Reduction | ☑ | **Ponto 3** | Noise Reduction | ☑ |
| Ponto 3 P | Logging | ☑ | Ponto 3 P | Logging | ☑ |
| Ponto 3 SP | VC Learning | ☑ | Ponto 3 SP | VC Learning | ☑ |
| Ponto Plus | DAI | ☐ | Ponto Plus | DAI | ☐ |
| Ponto Plus P | Streamer | ☑ | Ponto Plus P | Streamer | ☑ |
| Ponto | Battery  13 | | Ponto | Battery  13 | |

☐ Single-sided deafness
☐ Soft band

Single-sided deafness ☐
Soft band ☐

Ready

NUM  SCRL

# Selection and Getting Started

Genie Medical can run under NOAH or alone with its own database.



## Cables

HI-PRO and EXPRESSlink use Oticon #3 (2 m).
NOAHLink uses NOAHLink #2 (50 cm).
Take care to align the red dots when connecting the cable plug to the instrument.



If you use the Detect function, the instrument will automatically be connected upon entering the Fitting step.

## Single-sided Deafness fitting

• Select the instrument on the side with the implant and enter a check in the Single-sided deafness box.

• In Single-sided deafness fittings, the graph is displayed for the side where the client hears the sound.
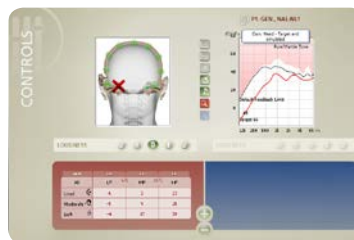


## Pre-operative demonstration or fitting on soft band

Check the Soft band box if an instrument is fitted on soft band, head band or test band. See page 11.

File   Genie Medical   Edit   Instrument   Preferences   Tools   Window   Help

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MEDICAL

PONTO 3

SELECTION   FITTING   END FITTING

PONTO 3

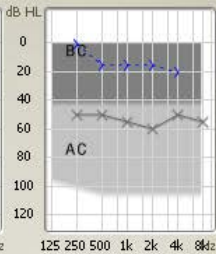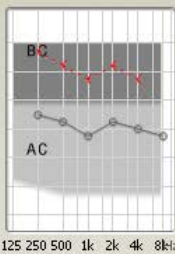**SELECTION**

- Select Instruments
- Program Manager

**LINKS**

- Colour Overview
- Cable Overview
- Accessories
- Instruction Videos

PROGRAM MANAGER

RIGHT                                                                    LEFT

General, NAL-NL1          (P1)    General, NAL-NL1

General, DSL BC, Adult    (P2)    General, DSL BC, Adult

(P3)

(P4)

ADD          COPY          DELETE

**OPTIONS FOR PROGRAM 2**

MAIN OPTIONS

| General | ► |

ADDITIONAL OPTIONS

NAL-NL1
DSL BC, Paediatric
DSL BC, Adult

Ready

NUM   SCRL

# Programs

Up to 4 programs which the client can operate on the instrument's push button can be defined. Select among:
- General (microphone)
- T/DAI/FM*
- T/DAI/FM+M*

*for Ponto, Ponto Pro and Ponto Pro Power.*

**For Ponto Plus and Ponto 3 families of sound processors:**
T, DAI and FM programs are automatically present in the instrument when the signal is activated from the Oticon Medical Streamer.
The programs can be adjusted in Connectline tool, see page 43.

## Programs in an individual fitting
All instruments but Ponto have, by default, 1 program:
- P1: General microphone with Automatic Directionality and Tri-state Noise Reduction

Ponto has, by default, 2 programs:
- P1: General, omni
- P2: General, Full directionality

## DSL-BC
Ponto sound processors fit using Genie Medical 2016.1 have the option of using the fitting rationale DSL-BC. For more information about DSL-BC, please see page 54.

**Selection**

General microphone programs can be defined for special purposes.
To change Directionality and Noise Reduction, go to Automatics in the Fitting step.

In the Preferences menu, you can set DSL-BC as the default fitting rationale.

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File | Genie Medical | Edit | Instrument | Preferences | Tools | Window | Help

Calculate Prescribed Settings
Program Instruments
Connect Instruments

Mute ▶

Upgrade Instrument Firmware

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MEDIC

PONTO 3

SELECTION  ➤  FITTING  ➤  END FITTING

## SELECTION

- 🔍 Select Instruments
- 🔁 Program Manager

### LINKS ⌃

- 🇫 Colour Overview
- 🇫 Cable Overview
- 🇫 Accessories
- 🇫 Instruction Videos

SELECTION

dB HL

BC
BC

0
20
40
60

**UPGRADE INSTRUMENT FIRMWARE** ✕

PONTO 3
PONTO 3

✓
✓

INSTRUMENT HAS NEWEST FIRMWARE
INSTRUMENT HAS NEWEST FIRMWARE

UPGRADE...

DETAILS
HELP
CLOSE

STYLE

None
Ponto
Ponto
Ponto
Ponto
Ponto Plus P.
Ponto
Ponto

Streamer ☑
Streamer ☑

Ponto Plus P.
Ponto
Ponto P.

Battery  13 ▾
Battery  13 ▾

◀▶

☑
☑
☑
☑
☐

Single-sided deafness ☐
Single-sided deafness ☐

Soft band ☐
Soft band ☐

NUM  SCRL

# Firmware Upgrade

Open the Upgrade Instrument Firmware tool in the Selection step from the Instrument menu.

## Upgrade Instrument Firmware

The Upgrade Instrument Firmware tool lets you upgrade instruments with new features and functionality when new instrument firmware (software) is available.

The client's individual setting in the instrument is retained when the firmware is upgraded, but Activity Analyzer/Memory and learned setting will be cleared.

## Oticon Medical Streamer

The firmware in the Oticon Medical Streamer is updated in the Oticon Medical Streamer Settings tool, accessible from the ConnectLine tool in the End Fitting step, see page 45.

## How to see whether an instrument can be upgraded?

Attach the programming cable to the instrument and open the tool. Automatically the instrument is detected and the tool informs you whether the instrument's firmware is the newest or an upgrade is available.

> Always insert a fresh battery in the instrument before running the Upgrade Instrument Firmware tool.
> Place the instrument on the table – not on the client's abutment while the instrument is upgraded.

# Controls

## Graph types

- Head: Simulates gain/output for the instrument as it would be on an abutment on the head.
- Skull: Simulates gain/output for the instrument as measured on a skull simulator.

## Controls

Click ◀▮▶▶ to expand the controls to 10 bands.

## MFO control*

MFO (Maximum Force Output) is always prescribed to max setting. Some clients (for example clients with bilateral atresia) may prefer temporarily – while they adapt to the output – to have the MFO decreased a few dB.

*In Ponto Plus family and Ponto 3 family sound processors.*
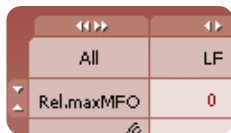
## Loudness control

Use the Loudness control to manage the client's initial reactions. The control is by default set to "0" in new fittings.

Decrease the setting if the client finds that the sound too loud, or own voice is too boomy/loud; primarily, the LF gain is reduced.

Increase the setting if the client finds the instrument too soft; primarily the HF gain is increased.
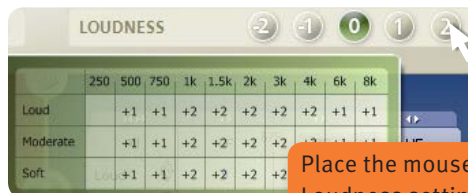
Place the mouse over the Loudness setting to display the control adjustments.

Use the Calculate Prescribed Settings tool in the toolbar to reset the instrument setting to target.

Fitting

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PONTO 3

SELECTION    FITTING    END FITTING

PONTO 3

FITTING

P1    P2

CONTROLS

Controls

Program Manager

MORE TOOLS

Feedback Manager
BC In-situ Audiometry
Automatics
Fitting Assistant
Verification Tool
Memory

P1: GEN., DSL BC, ADULT

dBµN
140    FLogram, Head - Target and
        simulated
        Normal Speech, 65 dB SPL
120

100

80

60        BC

40    OFL90 Target
      OFL90    RETFL

20    Normal Speech
      Speech Target

      125  250  500  1k  2k  4k  8k Hz

P1: GEN., DSL BC, ADULT

dBµN
140    FLogram, Head - Target and
        simulated
        Normal Speech, 65 dB SPL
120

100

80

60            BC

40    OFL90 Target
      OFL90    RETFL

20    Normal Speech
      Speech Target

      125  250  500  1k  2k  4k  8k Hz

LOUDNESS    -2  -1  0  1  2

LOUDNESS    -2  -1  0  1  2

| All | LF | 675 | MF | 1875 | HF |
|---|---|---|---|---|---|
| Loud | -28 | | -5 | | 1 |
| Moderate | -24 | | -2 | | 4 |
| Soft | -10 | | 5 | | 15 |

| All | LF | 675 | MF | 1875 | HF |
|---|---|---|---|---|---|
| Loud | -28 | | -5 | | 0 |
| Moderate | -24 | | -3 | | 3 |
| Soft | -10 | | 4 | | 11 |

Ready

NUM SCRL

# FLogram

## What is the FLogram?

The FLogram is to BAHS as the SPLogram is to air conduction hearing aids. It illustrates the patient's auditory dynamic range for Ponto fittings on abutment.

This new graph visualizes the relationship between the patient's BC hearing threshold level and the sound processor's output response, which makes it simple to evaluate audibility with the sound processor settings.

## What does the graph illustrate?

Grey line: Bone conduction hearing thresholds for normal-hearing persons when BC is stimulated directly on the abutment (RETFLdbc- Reference Equivalent Threshold Force Levels for direct bone conduction)

Coloured lines with markers: Patient´s BC hearing threshold level as used for gain prescription

Solid Coloured lines: Simulated aided long-term average spectrum for a selected signal type

Shaded areas: Simulated aided dynamic range of the signal

Solid black curve: Sound processor's output force level for a 90 dB SPL input signal (OFL 90)

The FLogram represents output force level on the abutment as perceived by the patient. The FLogram should not be used for the evaluation of soft band fittings, as the force coupling to the head is different.

In the Preferences menu, you can set  FLogram as the default view when entering the Controls screen.

File    Genie Medical    Edit    Instrument    Preferences    Tools    Window    Help

# oticon
## MEDICAL

PONTO 3

SELECTION        FITTING        END FITTING
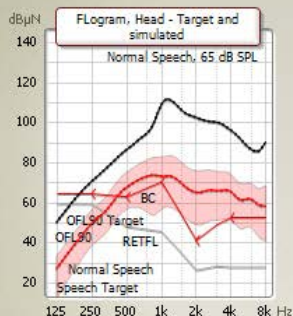
PONTO 3

## FITTING

P1   ∞   P2

- Controls
- Program Manager

### MORE TOOLS
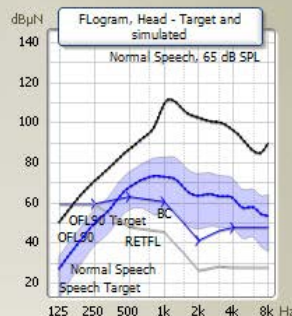
- Feedback Manager
- BC In-situ Audiometry
- Automatics
- Fitting Assistant
- Verification Tool
- Memory

FEEDBACK MANAGER

P1: GEN., DSL BC, ADULT

dBNdPa
80

Feedback Limit / Gain Head

60

40

20

0

Default Feedback Limit
Target
Gain, Head

125  250  500   1k   2k   4k   8k Hz

P1: GEN., DSL BC, ADULT

dBNdPa
80

Feedback Limit / Gain Head

60

40

20

0

Default Feedback Limit
Target
Gain, Head

125  250  500   1k   2k   4k   8k Hz
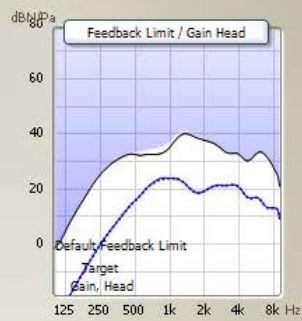
FEEDBACK MEASUREMENT

START        RESET

Reduce background noise as much as possible while
measuring feedback.

FEEDBACK LIMIT

DFC

MED.    P1    MED.

OFF     P2    OFF

Ready

NUM   SCRL

# Feedback Manager

The 2-stage Feedback Management system consists of Feedback Manager and Dynamic Feedback Cancellation (DFC). Due to updates in sound processor prescription, it is now recommended that the Feedback Manager be run prior to BC In-situ measurement.

## The Feedback Manager

In the Feedback Manager the client's feedback limit is measured. This is important as the limit varies from client to client, and the individual feedback limit maximizes the capacity of the DFC system. The feedback limit is also used to optimize the volume control functionality.

## Inium and Inium Sense feedback shield

The feedback shield in Ponto Plus instruments limits feedback through a variety of advanced signal processing, including frequency shift and an advanced decision making scheme.

## DFC settings

The DFC in the Ponto Plus and Ponto 3 families of sound processors automatically prescribed to either:
- Off
- Medium  - feedback shield without frequency shift
- Maximum - feedback shield including frequency shift

The DFC prescription is based on prescribed HF gain and the type of hearing loss.

**Fitting tips**
In case DFC is at Medium and the client is bothered by feedback, then the client may prefer DFC at Maximum setting.

Fitting

Phase inversion     Frequency shift     Feedback limit estimation

You can open the Feedback Manager from P1. Measured feedback limits are applied to all programs in the instrument.

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File   Genie Medical   Edit   Instrument   Preferences   Tools   Window   Help

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SELECTION   FITTING   END FITTING

PONTO 3

FITTING

P1   co   P2
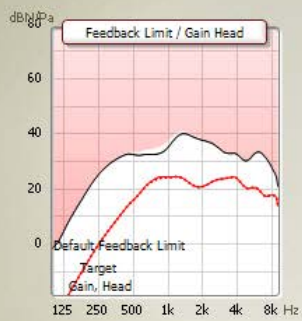
Controls

Program Manager

MORE TOOLS

Feedback Manager

BC In-situ Audiometry

Automatics

Fitting Assistant

Verification Tool

Memory

BC IN-SITU AUDIOMETRY

MEASURED ON ABUTMENT

dB HL
-20

0

20

40

60

80

100

120

125   250   500   1k   2k   4k   8kHz

Noise
level

MEASURED ON ABUTMENT

dB HL
-20

0

20

40

60

80

100

120

125   250   500   1k   2k   4k   8kHz

| 250 | 500 | 750 | 1k | 1.5k | 2k | 3k | 4k | 6k | 8k |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 20 | 20 | 30 | 35 | 25 | 25 | 30 | 30 | 25 | 30 |

PLAY TONE
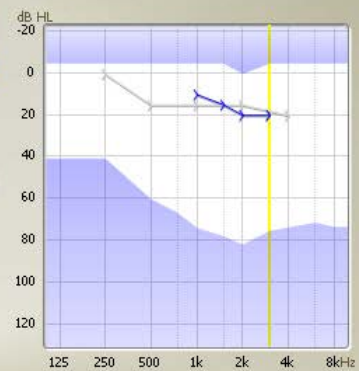
| 250 | 500 | 750 | 1k | 1.5k | 2k | 3k | 4k | 6k | 8k |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| - | - | - | 10 | 15 | 20 | 20 | - | - | - |

PLAY TONE

○ Conventional measurement   ● BC In-situ audiogram

● Continuous tone   ○ Pulsed tone

Ready

NUM   SCRL

# BC In-situ Audiometry

Use the BC In-situ Audiometry tool to measure the BC hearing threshold via the Ponto sound processors. We recommend using BC In-situ at the start of all fittings.

## Presenting the stimulus
You can use the mouse or keyboard to present the stimulus:
- Use the arrow keys to change the presentation level and frequency.
- Press the space bar (or PLAY TONE) as long as you want to present the stimulus.
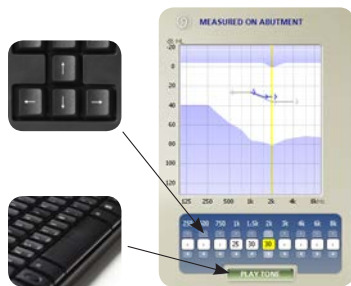


Store value: The last tone you play at each frequency is the value that is stored.

Bilateral fittings: Both instruments need to be connected to conduct BC In-situ.

Don't let the client see the flashing lamps on HI-PRO, EXPRESSlink or NOAHLink, because they reveal when the stimulus is presented.

## Talk Over
When you open the tool, the instrument's microphones are automatically muted to avoid interference from the surroundings; press the Talk Over button to talk to the client.

If the fitting is changed from a soft band/head band to an abutment, then you must again measure the hearing threshold with the BC In-situ tool, as the result will be different.

## Noise Level
While it is not essential for BC In-situ to be measured in a sound treated room or booth, the testing environment should be quiet. The indicator will turn red if there is background noise present. Attempt to reduce background noise prior to proceeding with the test if the patient has a good ear that will hear the background noise.

File   Genie Medical   Edit   Instrument   Preferences   Tools   Window   Help

oticon
MEDICAL

PONTO 3

SELECTION     FITTING     END FITTING

PONTO 3

FITTING

P1  ⊙  P2
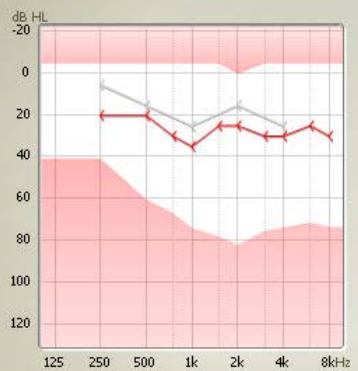
Controls
Program Manager

MORE TOOLS

Feedback Manager
BC In-situ Audiometry
Automatics
Fitting Assistant
Verification Tool
Memory

AUTOMATICS

P1: GEN., DSL BC, ADULT

Multiband Adaptive Directionality

P1: GEN., DSL BC, ADULT

Multiband Adaptive Directionality

| Directionality | Auto (tri-mode) | | Directionality | Auto (tri-mode) |
| Surround mode | Speech Omni | | Surround mode | Speech Omni |
| Noise Management | On | | Noise Management | On |

BINAURAL BROADBAND ON

Ready

NUM   SCRL

# Automatics

## Automatic Directionality (tri-mode)*
Automatically one of the three modes (Surround, Split or Full directionality) will be selected based on the mode that provides the best Signal-to-Noise Ratio.

Consult the Analyzer/Memory to see how often automatic tri-mode directionality has been in Surround, Split and Full directional modes.

## Ponto 3 with FreeFocus
The FreeFocus directionality system differs from the directionality modes in Ponto Plus on the following parameters:
- All omni-directional patterns are optimised to take into account reflections from head and torso
- A new mode called Speech Omni is added

## Wind Noise Reduction
Depending on the wind noise level, sounds will be attenuated. The more wind, the more attenuation. In programs with automatic directionality the Wind Noise Reduction system will – in addition – force the instrument into Surround mode.

## Tri-state Noise Reduction*
The Tri-state Noise Reduction system utilizes 15 bands. Different noise reduction schemes are automatically applied for speech in noise and noise-only situations.

## Binaural synchronization
For patients who wear two Ponto 3 family sound processors, the directionality modes and noise management systems will be synchronised, to ensure they are aligned between the left and right side devices.

*Not available in the Ponto instrument.*

Fitting

27
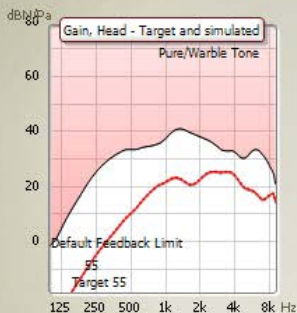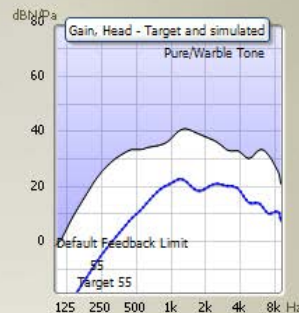
# Fitting Assistant Tool

## The Fitting Assistant Tool allows for supported fine tuning of the following parameters

- Low Frequency Roll-Off
  Reduces LF gain linearly over all input levels
- Low Frequency Compression Ratio
  Decreases moderate and loud gain settings
  for increasing low frequency compression ratio
- Soft Sound Perception
  Can increase high frequency soft gain



For specific information on what is being changed, mouse-over the trimmer to see a chart which indicates the adjustment made at each frequency.

Fitting

Genie Medical  Susan  Johnson

File   Genie Medical   Edit   Instrument   Preferences   Tools   Window   Help

oticon
MEDICAL

PONTO 3

SELECTION → FITTING → END FITTING

PONTO 3

VERIFICATION

FITTING
P1  ⊙  P2

(||) Controls
(⊙) Program Manager

MORE TOOLS ⊗

(🕸) Feedback Manager
(⤵) BC In-situ Audiometry
(🔀) Automatics
(👥) Fitting Assistant
(✍) Verification Tool
(⊙) Memory
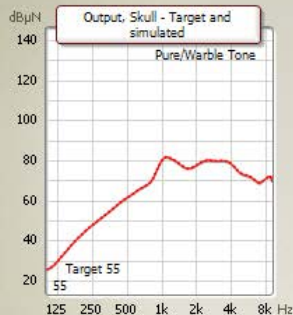
VERI.
SETTINGS

☐ NM
☐ AD
☑ DFC
☐ VCL

DEFAULT

**P1: GEN., DSL BC, ADULT**

dBµN
Output, Skull - Target and simulated
Pure/Warble Tone

140
120
100
80
60
40
20
Target 55
55

125  250  500  1k  2k  4k  8k Hz

LOUDNESS   -2  -1  0  1  2

| All | LF 675 | MF 1875 | HF |
|---|---|---|---|
| Loud | -28 | -4 | 1 |
| Moderate | -25 | -2 | 6 |
| Soft | -11 | 4 | 19 |

**P1: GEN., DSL BC, ADULT**

dBµN
Output, Skull - Target and simulated
Pure/Warble Tone

140
120
100
80
60
40
20
Target 55
55

125  250  500  1k  2k  4k  8k Hz

LOUDNESS   -2  -1  0  1  2

| All | LF 675 | MF 1875 | HF |
|---|---|---|---|
| Loud | -28 | -5 | 0 |
| Moderate | -25 | -3 | 3 |
| Soft | -11 | 4 | 11 |

Ready

NUM  SCRL

# Verification

Use the Verification tool to easily set-up the instruments' advanced features for skull simulator measurements.



## Define advanced feature settings

Use the Verification setting panel to activate and deactivate advanced features that might disturb measurements. When a setting is checked, it is activated.



NM: Noise Management
AD: Automatic Directionality
DFC: Dynamic Feedback Cancellation
VCL: Learning Volume Control

The panel reflects the advanced features' settings only while working within the Verification tool.

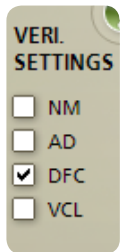> When leaving the Verification tool the advanced feature settings will always be re-set to how they were when entering the tool.

When using Interacoustics Affinity measurement equipment and Genie Medical through Noah, then automatically the Affinity measurement module will be launched when the Verification tool is opened.



## Compare the measured responses

Simulated responses from Ponto sound processors are displayed in Genie Medical, and can be compared to the measured skull simulator output responses.

Simply choose the "Output, Skull" graph in Genie Medical, selecting the signal type and input levels which are identical to those used in the Affinity measurements.

- Signal type  : choose amongst others between Pure/Warble Tone; White Noise; ANSI S3.42.
- Input levels  : choose any levels between 45 and 90 dB SPL input.

> For more information about the skull simulator, find the Skull Simulator Guide online at www.oticonmedical.com

**Panel 1 (marked 1):**

MEMORY

USAGE  VOLUME CONTROL  SIGNAL PROCESSING  LEARNING  CONFIGURATION

RELATIVE USAGE TIME

RELATIVE USAGE TIME

%
100
75
50
25

%
100
75
50
25

<0.5  0.5-2  2-4  4-8  8-12  12-20  >20 Hours

<0.5  0.5-2  2-4  4-8  8-12  12-20  >20 Hours

TOTAL USAGE

TOTAL USAGE

Time _____ Hours per day

Time [ 13,2 ] Hours per day

○ Program Use
● Usage Time
○ Streamer Use

06-09-2016 - 20-09-2016

**Panel 2 (marked 2):**

MEMORY

SUMMARY  USAGE  VOLUME CONTROL  SIGNAL PROCESSING  LEARNING  CONFIGURATION

STREAMER USE

STREAMER USE

%
100
75
50
25

%
100
75
50
25

TV  CL Mic  Phones  Audio  Telecoil  FM

TV  CL Mic  Phones  Audio  Telecoil  FM

TOTAL USAGE

TOTAL STREAMER USAGE

Time _____ Hours per day

Time [ 2,5 ] Hours per day

○ Program Use
○ Usage Time
● Streamer Use

06-09-2016 - 20-09-2016

**Panel 3 (marked 3):**

MEMORY

SUMMARY  USAGE  VOLUME CONTROL  SIGNAL PROCESSING  LEARNING  CONFIGURATION

AVERAGE VC SETTING (dB)
PERCENTAGE OF OVERALL TIME

AVERAGE VC SETTING (dB)
PERCENTAGE OF OVERALL TIME

% VC Up
15
10
5
0

60
45
30
15
0

% VC Up

Average  1,9 dB  0 dB  2,9 dB

% VC Down
5
10
15

30
15
6
0

% VC Down

Soft  Moderate  Loud

P1

P1: GENERAL, NAL-NL1

06-09-2016 - 20-09-2016

**Panel 4 (marked 4):**

MEMORY

SUMMARY  USAGE  VOLUME  SIGNAL PROCESSING  LEARNING  CONFIGURATION

MULTIBAND ADAPTIVE DIRECTIONALITY

%
40
30
20
10

<40  40-50  50-60  60-70  70-80  80-90  >90  dB SPL

Environment

Tri-state Noise Management

Multiband Adaptive Directionality

Surround  Split Dir  Full Dir
79 %      15 %      6 %

P1

P1: GENERAL, NAL-NL1

06-09-2016 - 20-09-2016

# Memory/Analyzer (1/3)

## The Memory/Analyzer tool
The tool displays the client's usage of the instrument, the type of environments the client has been exposed to, and how often the advanced automatic features have been active.
The tool is not available in the Ponto instrument.

## Summary tab
Provides an overview of how many hours the client has used the instrument, and at which sound levels.

## ❶ Usage tab
Displays how long the instrument has been turned on each time it has been used.
It also reveals the percentage of time each program has been used.

❷ For Oticon Medical Streamer the usage of telecoil and the different ConnectLine solutions is displayed.

## ❸ Volume Control tab
The VC usage is shown for soft, moderate and loud environments.
Within each environment, the percentage of time the VC has been turned up or down is displayed. The average deviation from the last programmed setting is given in dB.

## ❹ Signal Processing tab
Tri-state Noise Management shows how long the client has been in quiet, speech only, speech in noise and noise-only environments.
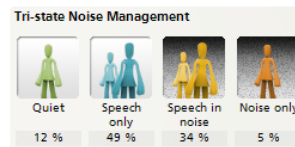


Multiband Adaptive Directionality shows how long the instrument has been in Surround, Split and Full directional modes.
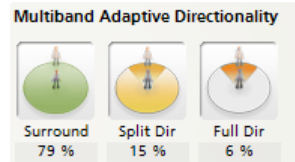
## Screen 1 — MEMORY / LEARNING

**CURRENT**

| | Soft | Moderate | Loud |
|---|---|---|---|
| Speech Only | | | |
| Speech in Noise | | | |
| Noise Only | | | |

**1** Current
⊙ Volume Control

History ≫

P1 P2

**P1: GENERAL, NAL-NL1**

## Screen 2 — MEMORY / LEARNING

**HISTORY**

10

0

-10

Current Weeks

Current ≫

**2** History
⊙ Volume Control

Click RESET to remove changes derived from Learning.

RESET

P1 P2

**P1: GENERAL, NAL-NL1**    06-09-2016 - 20-09-2016

# Memory/Analyzer (2/3)

## Learning based on the client's use of the volume control

The client's VC adjustments are logged in 9 different environments. The 9 environments are characterized by the sound level (soft, moderate and loud) and type (speech only, speech in noise and noise only).
Learning (adjustment of gain) takes place individually for each of the 9 environments and reflects the client's use of the VC in these environments.

## ❶ Current view of VC Learning

Changes from the initial setting are shown by vertical white bars; place the mouse over the bars to see how much the gain has changed within each environment.
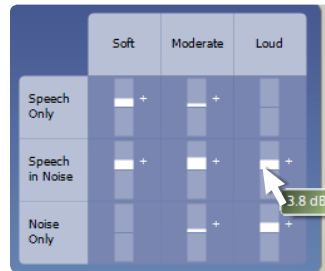


## ❷ History view of VC Learning

The screen shows the development over time for VC Learning. VC learning is converted into a single number.

Click Reset to delete changes derived from Learning.

Fitting

# Memory/Analyzer (3/3)

## Configuration tab

Logging is active and VC Learning is deactive by default. In this tab you can deactivate/activate them. Load logged data from older sessions, to see possible changes in the client's usage pattern, volume control or program operation.

Click the Delete all Memory/Analyzer data icon to clear the data logged in the instrument.
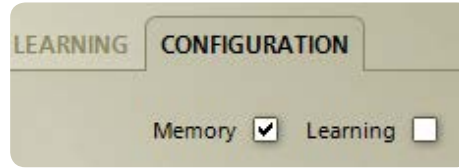
Logging is active and VC Learning is deactivated by default. You can change the default to set-up in Preferences/Specific Preferences/Fitting Step.

Fitting

File   Genie Medical   Edit   Instrument   Preferences   Tools   Window   Help

oticon
MEDICAL

PONTO 3

SELECTION  →  FITTING  →  END FITTING

PONTO 3

## END FITTING

- Save and Exit
- Buttons and Beeps
- ConnectLine

### LINKS

- Accessories
- Instruction Videos

SAVE AND EXIT

### PONTO 3

Serial: 43624250
Logging:  On
Learning:  Off
Volume Control:  On
Mute:  On
Battery Life:  Typically 70-130 hours
P1: Gen., DSL BC, Adult, Auto (tri-mode)
P2: Gen., NAL-NL1, Auto (tri-mode)

### PONTO 3

Serial: 43501795
Logging:  On
Learning:  Off
Volume Control:  On
Mute:  On
Battery Life: Typically 70-130 hours
P1: Gen., DSL BC, Adult, Auto (tri-mode)
P2: Gen., NAL-NL1, Auto (tri-mode)

OTICON MEDICAL STREAMER ☑          ☑ OTICON MEDICAL STREAMER

Serial number (optional)  [                ]          [                ]  Serial number (optional)

READ SERIAL NUMBER          READ SERIAL NUMBER

SAVE, PROGRAM AND EXIT

Ready                                                                                    NUM   SCRL

# Save and Exit

Gives an overview of the fitting and displays:
- the serial number of the instrument(s)
- the programs the client can select when the instrument is programmed and disconnected
- the directional setting in the programs
- possibility to link a Ponto Plus instrument to the Ponto Streamer, notice it is not required (see page 7).

Click Save, Program and Exit to store the setting in the instrument and in NOAH or stand-alone database.

Show the client how to connect/disconnect the instrument.

*Connection*       *Disconnection*
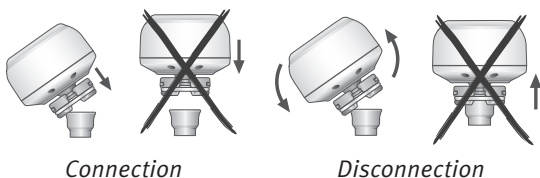
## Instruct the client in the use of the instrument

### Change program
Briefly press and release the push-button. Beeps played after the release indicate the program number.

### Mute/stand-by
To mute or put the instrument on stand-by, press and hold the pushbutton until it emits 2 beeps. Release the button; the instrument is muted. Press briefly to un-mute the instrument.
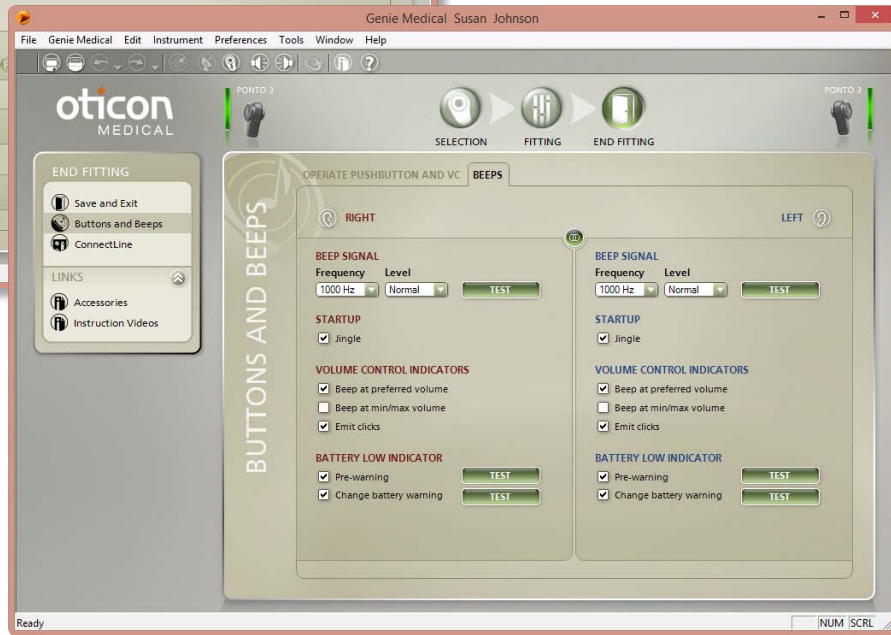
### Start-up level
The instrument starts up at a gain level that matches the individual setting in the instrument.
If VC learning is active, the start-up level will adapt to the client's preferred VC setting.

See the Instructions for Use for more information.

**End Fitting**

**Window 1 (Operate Pushbutton and VC):**

Genie Medical  Susan  Johnson

File   Genie Medical   Edit   Instrument   Preferences   Tools   Window   Help

PONTO 3                                                                    PONTO 3

SELECTION          FITTING          END FITTING

END FITTING

- Save and Exit
- Buttons and Beeps
- ConnectLine

LINKS

- Accessories
- Instruction Videos

BUTTONS AND BEEPS

OPERATE PUSHBUTTON AND VC   BEEPS

RIGHT                                                          LEFT

PROGRAM                          PROGRAM                        PROGRAM
Press briefly                                                   Press briefly

VC                               VC                             VC
Turn the wheel                                                  Turn the wheel

MUTE                                                            MUTE
Press about 2 seconds                                           Press about 2 seconds

PROGRAM SWITCH

○ Use program pushbutton
○ Select default program

VOLUME CONTROL

☑ Use VC

MUTE FUNCTION

☑ Use mute

Ready

**Window 2 (Beeps):**

Genie Medical  Susan  Johnson

File   Genie Medical   Edit   Instrument   Preferences   Tools   Window   Help

PONTO 3                                                                    PONTO 3

SELECTION          FITTING          END FITTING

END FITTING

- Save and Exit
- Buttons and Beeps
- ConnectLine

LINKS

- Accessories
- Instruction Videos

BUTTONS AND BEEPS

OPERATE PUSHBUTTON AND VC   BEEPS

RIGHT                                                          LEFT

BEEP SIGNAL                                                    BEEP SIGNAL
Frequency   Level                                             Frequency   Level
1000 Hz     Normal     TEST                                   1000 Hz     Normal     TEST

STARTUP                                                        STARTUP
☑ Jingle                                                      ☑ Jingle

VOLUME CONTROL INDICATORS                                     VOLUME CONTROL INDICATORS
☑ Beep at preferred volume                                   ☑ Beep at preferred volume
☐ Beep at min/max volume                                     ☐ Beep at min/max volume
☑ Emit clicks                                                ☑ Emit clicks

BATTERY LOW INDICATOR                                         BATTERY LOW INDICATOR
☑ Pre-warning            TEST                                ☑ Pre-warning            TEST
☑ Change battery warning TEST                                ☑ Change battery warning TEST

Ready                                                                          NUM  SCRL

# Buttons and Beeps

## Pushbutton
The pushbutton is used to operate the programs and mute the instrument.
- The pushbutton's program functionality is, by default, active when multiple programs are defined in the instrument.
- The mute/stand-by functionality is, by default, active.

## Volume control
- Is by default active; you can deactivate it here.

## Binaural coordination
Ponto 3 sound processors have binaural coordination capabilities, meaning that for patients wearing two sound processors, an action such as changing the volume level or program in one sound processor will also be reflected in the other sound processor.

## Beeps
Go to the Beeps tab to select the beep function or change frequency and beep level.

**By default, the following are active:**
- Start-up jingle
- Beep at preferred VC volume
- Clicks indicating the VC step when volume is changed
- Battery low pre-warning
- Change battery warning

**End Fitting**

41

File  Genie Medical  Edit  Instrument  Preferences  Tools  Window  Help

**oticon**
MEDICAL

PONTO 3

SELECTION   FITTING   END FITTING

PONTO 3

CONNECTLINE

**END FITTING**
- Save and Exit
- Buttons and Beeps
- ConnectLine

**LINKS**
- Accessories
- Instruction Videos

OVERVIEW  TV  PHONES  MICROPHONE  AUDIO  TELECOIL  FM

**TV**
› ConnectLine TV

**PHONES**
› ConnectLine Phone
› Mobile Phone

**MICROPHONE**
› ConnectLine M...

**AUDIO**
› Additional de...
› MP3 player, i...

**TELECOIL**
› ConnectLine T...

**FM**
› ConnectLine F...

Ready

---

OVERVIEW  TV  PHONES  MICROPHONE  AUDIO  TELECOIL  FM

**GENERAL PERCEPTION**

Softer   STREAMER LEVEL   Louder

Softer   INSTRUMENT MIC LEVEL   Louder

Fuller   SOUND QUALITY   Brighter

POWER BASS              Off

**GENERAL PERCEPTION**

Softer   STREAMER LEVEL   Louder

Softer   INSTRUMENT MIC LEVEL   Louder

Fuller   SOUND QUALITY   Brighter

POWER BASS              Off

Ready

NUM  SCRL

# ConnectLine

The ConnectLine tool lets you fine tune the client's listening experience when using a ConnectLine solution. Using ConnectLine also gives access to the Oticon Medical Streamer Setting tool for customization of the Streamer (see page 45).

When an Oticon Medical Streamer is selected, then the ConnectLine tool is accessible in End Fitting step.

## Instruction videos
Genie Medical contains a number of instructional videos demonstrating how to pair the Oticon Medical Streamer to the ConnectLine products, and how to install the ConnectLine products. The videos are accessible within both the Selection and End Fitting steps.

## Activate/deactivate the microphones
When listening to signals from the Streamer, the microphone on the wireless Ponto sound processor(s) can be turned on/off by pressing the volume up AND volume down buttons simultaneously for 1 second.

*Volume control (up/down)*
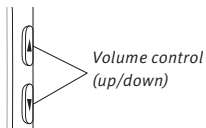
## Fine tuning of ConnectLine solutions
The settings for listening to the following ConnectLine solutions can be fine tuned: TV, Phones, Microphone, Audio, Telecoil and FM. The settings are automatically activated when the listening program is activated on the Oticon Medical Streamer.

**Fitting tips:**
If the client complains that the ambient sound picked up by the wireless Ponto sound processor is too low when watching TV (with the TV adapter), and
- The 'Instrument Mic level' is already set at 0 dB: set 'Streamer Level' at a lower/softer setting, which lowers the TV sound and keeps the ambient sound at the same level as before.
- The 'Instrument Mic level' is not set to 0 dB: set the 'Instrument Mic level' to a higher/louder setting.

*See www.oticonmedical.com for information on how to use Oticon Medical Streamer.*

# OTICON MEDICAL STREAMER SETTINGS

## Connected Device

| SERIAL | VERSION | FW AVAILABLE |
|--------|---------|--------------|
| ◉ 1137437 | OM STREAMER | |

**CONFIGURATION** | FIRMWARE UPGRADE

Preferred Settings ▼

## STREAMER SETTINGS

**Remote Control**
- ☑ Volume control
- ☑ Change program
- ☑ Mute
- ☑ Remote on when Streamer off

**Lights/jack**
- ☑ Visual indicators
- ☐ Autostart from mini-jack / head set

**Side button**
- ◉ Tcoil (long press) - Audio (short press)
- ○ Tcoil (short press) - Audio (long press)

## STREAMER FUNCTIONALITY

- ◉ Full functionality
- ○ Phone only
- ○ Microphone only
- ○ TV only
- ○ Remote only

## PHONE SETTINGS

Landline [Tone B ▾]    Mobile [Tone A ▾]

- ☐ Any front button answers call
- ☑ Voice dial
- ☑ Redial
- ☐ Transfer call
- ☑ Reject call
- ☐ Music and notifications from mobile phone

## STREAMER MODE

- ○ Linked    ◉ Open

## STREAMER RESET

- ☑ Keep pairings between Streamer and connectivity products

[ Restore to factory settings ]

# Oticon Medical Streamer Settings

## Settings tool

The Oticon Medical Streamer Settings tool makes it possible to configure the Streamer to the individual user, enable advanced features and change the link status from Open to Linked.
The Streamer Settings tool is accessible from the ConnectLine tool (see page 43).

## Built-in T-coil

The Oticon Medical Streamer has a built-in tele loop receiver (T-coil).
By default the T-coil is activated by pressing and holding the AUX selector for approx. 2 seconds. This can be changed so the T-coil is activated by a brief press instead.

## Demo Oticon Medical Streamer

When using a Demo Oticon Medical Streamer, the box called "Streamer Mode" will not appear in the Streamer

Settings Tool. This is because the Demo Streamer is permanently OPEN, meaning that it is impossible to link that Streamer to any specific sound processor.

On/off
Status
On/off
Pairing
Battery indicator

On/off

Volume control (up/down)
Mute instrument microphone

Phone

Microphone

TV

AUX selector

Mini jack

Telecoil

FM plug
EURO pin socket
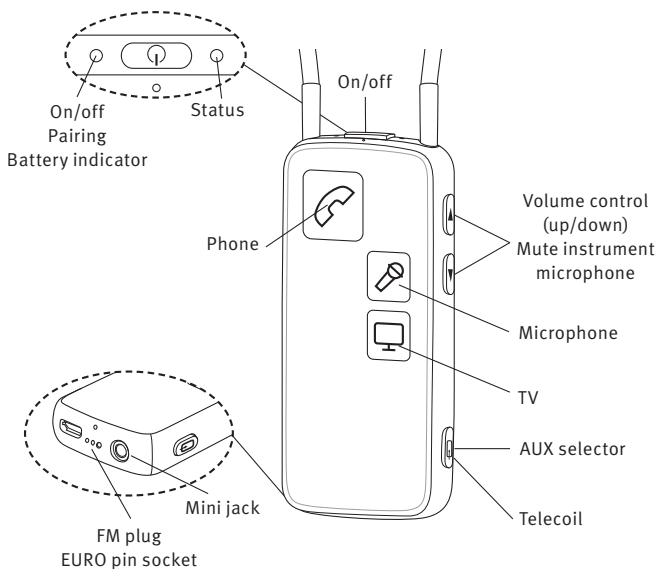
End Fitting

*For more information on Oticon Medical Streamer please visit www.oticonmedical.com*

File   Genie Medical   Edit   Instrument   Preferences   Tools   Window   Help

Reset to Factory Settings...

Technical Measurements...

oticon
MEDICAL

PONTO 3

**END FITTING**

- Save and Exit
- Buttons and Beeps
- ConnectLine

**LINKS**

- Accessories
- Instruction Videos

SAVE AND EXIT

**RESET TO FACTORY SETTINGS**

FACTORY SETTINGS

Gain, Head - Target and simulated
Pure/Warble Tone

dBN/Pa
80

60

40

20

0

-20

35
Target 55

125   250   500   1k   2k   4k   8k   Hz

PONTO 3

USER SETTINGS

Gain, Head - Target and simulated
Pure/Warble Tone

dBN/Pa
80

60

40

20

0

-20

35
Target 55

125   250   500   1k   2k   4k   8k   Hz
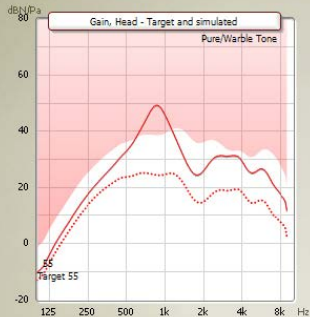
PONTO 3

User settings
Factory settings

Factory settings are stored in the instrument and logged data
in the instrument has been deleted.
The instrument is disconnected from Genie Medical.

PROGRAM
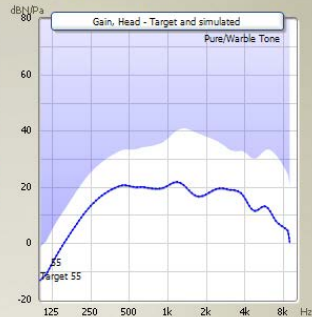
User settings
Factory settings

User settings are stored in the instrument.
To replace them with factory settings, select Factory Settings
and click Program.

PROGRAM

HELP      CLOSE

SAVE, PROGRAM AND EXIT

Ready

NUM   SCRL

# Factory Settings

Open the Reset to Factory Settings tool in the End Fitting step from the Tools menu.

## Reset to Factory Settings

Use this tool to reset the instrument to its factory settings. For various reasons, you may wish to use the factory settings in the pre-operative evaluation.

1. Select Factory Settings
2. Click Program
   The logged data is now cleared from the instrument and the settings are reset. The instrument is automatically disconnected from Genie Medical.
3. Click Close
   The client data will be saved when you close Genie Medical.

You can always read the logged data from an instrument, including an instrument with factory settings.

## Factory Settings

The instruments are delivered with the following programs and settings:

**Ponto 3, Ponto 3 Power, Ponto 3 SuperPower, Ponto Plus, Ponto Plus Power, Ponto Pro and Ponto Pro Power**
P1: General mic. (Wideband amplification, Automatic directionality, Noise Reduction)
P2: General mic. (High-frequency emphasis, Automatic directionality, Noise Reduction)
P3*: T/DAI/FM, microphone Off
   *only in Ponto Pro and Ponto Pro Power*

**Ponto**
P1: General mic. (Wideband amplification, omni directionality)
P2: General mic. (High-frequency emphasis due to Full directionality)
P3: T/DAI/FM, microphone Off

Genie Medical  Susan  Johnson

File    Genie Medical    Edit    Instrument    Preferences    Tools    Window    Help

Reset to Factory Settings...

Technical Measurements...

**oticon**
MEDICAL

END FITTING

- Save and Exit
- Buttons and Beeps
- ConnectLine

LINKS

- Accessories
- Instruction Videos

SAVE AND EXIT

TECHNICAL MEASUREMENTS

A0: OMNI

USER SETTINGS

Gain, Skull - Simulated

Gain, Skull - Simulated

Pure/Warble Tone

Pure/Warble Tone

PONTO 3

PONTO 3

User settings
✔ Full on Gain (A0)
IEC Reference Gain (B0)
ANSI Reference Gain (N0)

✔ User settings
Full on Gain (A0)
IEC Reference Gain (B0)
ANSI Reference Gain (N0)

PROGRAM        RESET        PROGRAM        RESET

OPEN HIT MODULE

HELP    CLOSE

SAVE, PROGRAM AND EXIT

Ready                                    NUM  SCRL

# Technical Measurements

Open the Technical Measurements tool in the End Fitting step from the Tools menu.

## Technical Settings

Use this tool to program the instrument with a technical setting for skull simulator measurements in an Interacoustics acoustic measurement box.



The instruments can be programmed with the following IEC or ANSI standard settings as defined for air conduction hearing aids:
- Full on Gain (A0)
- IEC Reference Gain (B0)
- ANSI Reference Gain (N0)

The programs below can be activated with the instrument's push button once a technical setting is programmed into the instrument:
P1 – Omni (all instruments)
P2 – Directional (all instruments)
P3 – DAI (only Ponto, Ponto Pro and Ponto Pro Power)
P4 – DAI + M (only Ponto, Ponto Pro and Ponto Pro Power)

## Compare the measured curves

You can compare the measured skull simulator responses with the graphs in the Technical Measurements tool (as shown above) or with the Oticon Medical Product Information sheets.
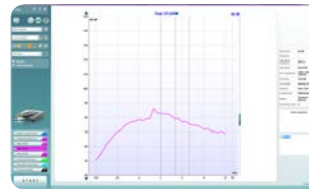


Measured output response

End Fitting

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File   Genie Medical   Edit   Instrument   Preferences   Tools   Help

oticon
MEDICAL

CLIENT   SELECTION   FITTING   END FITTING

CLIENT

Select Client
Client Details
Audiogram

AUDIOGRAM

dB HL

| | 125 | 250 | 500 | 750 | 1k | 1.5k | 2k | 3k | 4k | 6k | 8k | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ◇● | | 50 | 55 | | 65 | | 55 | | 60 | | 65 | AC | |
| < [ | | 5 | 15 | | 25 | | 15 | | 25 | | | BC | |
| m | | | | | | | | | | | | UCL | |

| | 125 | 250 | 500 | 750 | 1k | 1.5k | 2k | 3k | 4k | 6k | 8k |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ×× | | 50 | 50 | | 55 | | 60 | | 50 | | 55 |
| > ] | | 0 | 15 | | 15 | | 15 | | 20 | | |
| m | | | | | | | | | | | |

AC
BC
UCL
Masked

# Client – stand-alone database

Genie Medical can run stand-alone with its own database, in which client data and instrument settings are stored.

## Select Client
1. Click New to start entering a new client
2. Fill in the client data
3. Click Save
4. Go to Audiogram to enter BC and AC thresholds

## Audiogram
Enter the BC and AC values either in the audiogram or in the table below. Right click in the graph to delete a tag or to indicate that it is unmeasurable.

BC unmasked symbol
In the menu Preferences/Specific Preferences/Graph Format you can choose the symbol for unmasked BC: Either ‹ › (default) or [ ].

Client

Candidacy
Guide

Audiological
Manual

Ponto 3, Ponto 3 Power & Ponto 3 SuperPower
Product Information
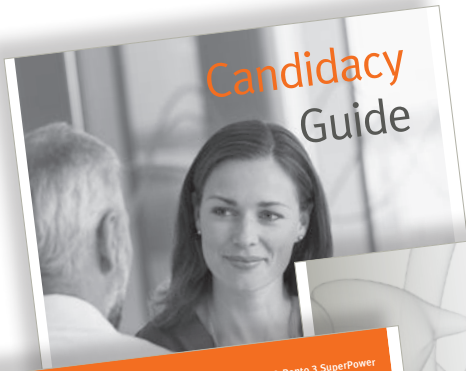
See the Candidacy Guide for information on who is a candidate for Ponto, pre-operative trial, counseling and fitting on a softband.
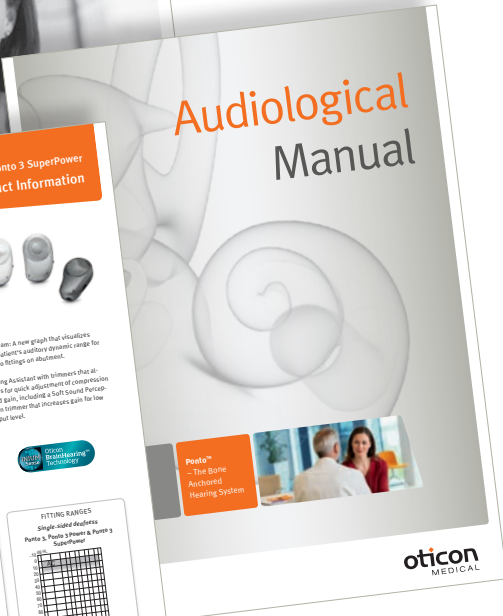
See the Audiological Manual for more information about the fitting process, follow-up evaluation and paediatrics.

See the Product Information for more information about instrument data.

You can download these and other relevant documents from **www.oticonmedical.com**

# Paediatrics – useful functions in Genie Medical

## Soft band fitting mode
We recommend activating the Soft band box in the Selection task when fitting the instrument on a soft band. This will compensate for the damping of the signal via skin and tissue. See also Pre-operative Evaluation, page 11.



## Fitting infants
For infants wearing the instrument on a soft band on the forehead, ensure that the instrument has a fixed omni program:
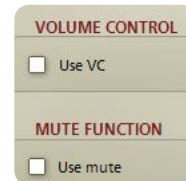In Fitting step, Automatics, set Directionality to Surround.



## Analyzer/Memory
You can at any time connect a Ponto instrument to Genie Medical and, in Analyzer/Memory, see how long the instrument has been turned on, and in which environments.

## Deactivate pushbutton and VC
Go to End Fitting/Button and Beeps to deactivate:
- Program operation
- Volume control
- Mute/Stand-by



## Only a T/DAI/FM+M program*
If you want the child to have only a T/DAI/FM+M program, then:
1. In Program Manager, click Add to add a P2. Select the T/DAI/FM+M program for P2.
2. In End Fitting step/Buttons and Beeps, choose Select default program, and click P2.



* for Ponto, Ponto Pro and Ponto Pro Power

For more information on Paediatric fittings, download the Paediatric Guide from www.oticonmedical.com

# Fitting Strategy

## Modified NAL

- Conductive and mixed losses
  The prescription of gain for conductive losses is based upon published studies and internal tests. The prescribed gain is linear, as there is no hearing loss in the cochlea. In mixed hearing losses, the sensorineural part of the hearing loss is compensated for according to modified NAL- NL1, so little compression is prescribed.

- Single-sided deafness
  Compared to a conductive hearing loss, reduced low-frequency amplification is provided as there is no head shadow effect at low frequencies. The low-frequency reduction lowers interference in the good ear. In addition, more high-frequency amplification is provided to compensate for the transcranial attenuation.

## DSL-BC

The DSL rationale was developed at the University of Western Ontario. DSL stands for "Desired Sensation Level".

The rationale maps a natural dynamic range to the client's dynamic range (residual auditory area). DSL-BC is adapted from DSL v5.0a m[i/o] and optimised for bone-anchored hearing systems. DSL v5.0a m[i/o] is the newest version of DSL and prescribes amplification in four stages - expansion, linear, compression and output limiting. DSL corrects differently for monaural and binaural fittings, and has one prescription for children and another for adults.

Compared to the air-conduction version (DSL v5.0a m[i/o]), the DSL-BC utilises the sound processor's maximum force output level as upper limit of the patient's audiotory dynamic range, instead of UCL values.

# Conventional BC Audiometry Thresholds

We recommend measuring the hearing threshold with the BC In-situ tool; if this tool is not used and the fitting thus is based upon conventional BC audiometry thresholds, then the gain prescribed for

- conductive and mixed hearing losses is based upon BC thresholds entered for both left and right sides. This takes into account the fact that sounds always cross from one side of the skull to the other in a bone-anchored hearing solution.
  For asymmetrical BC thresholds, gain is prescribed to the cochlea with the lowest gain prescription.

- single-sided deafness fittings are based upon the BC threshold for the good ear.

We recommend entering the BC threshold for both sides also when performing a monaural fitting.

BC HTL                    BC HTL
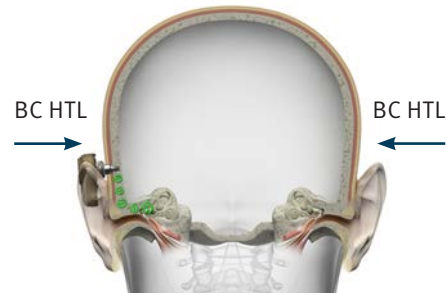
*Conductive/mixed HL:*
*Measure BC on both sides*

BC HTL
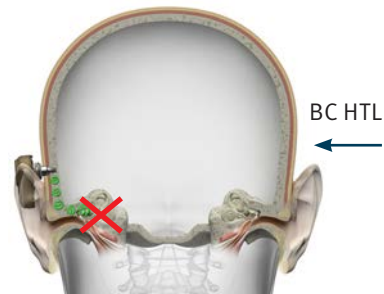
*Single-sided deafness:*
*Measure BC on the good ear side*