Oticon Fitting Guide
Audible Contrast Threshold (ACT™)

This guide provides a quick overview of how to use the ACT diagnostic test to personalise the fitting of Oticon hearing aids, supporting your client's needs when listening to speech in noise.

The purpose of ACT

ACT is an above-threshold, language-independent diagnostic test that is used to measure a client's real-world ability to hear in noise, with the intention of determining the level of help in noise needed. While the audiogram provides insight into the client's audibility, the ACT value reflects the client's hearing-in-noise ability. The single ACT value measured per client is used as part of the prescription of Oticon hearing aids, from Oticon Real™ onwards. Whether you are fitting monaural or binaural hearing aids, the prescription applied will be the same, with the output adjusted accordingly if there is a difference between the ears.

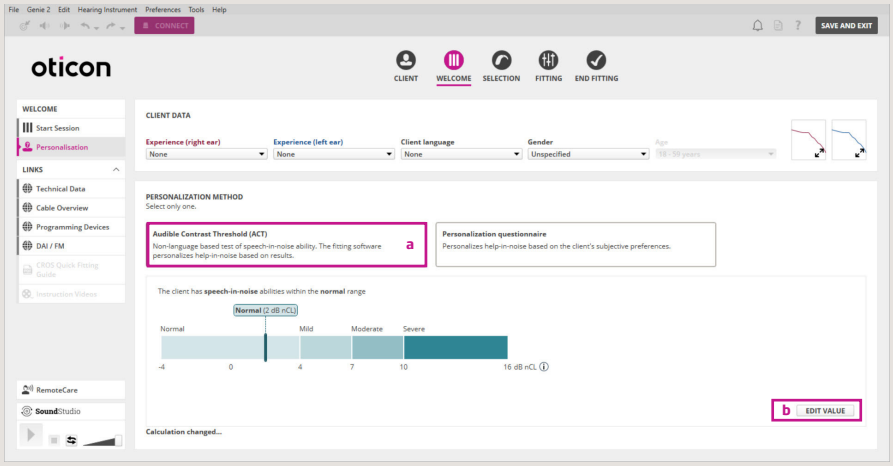
The ACT value provides an evidence-based prescription that impacts MoreSound Intelligence™ settings in the hearing aids to support your client's ability to hear in difficult or noisy environments. Based on the ACT value, the hearing aid makes use of this information by creating contrast so that speech is emphasised compared to the undesired background noise. Audiometric thresholds and age are also factored into the prescription. For an in-depth understanding of ACT and its supporting research, see Santurette & Laugesen (2023).

ACT value severity categories

Your client's ACT value will fall within one of four severity categories: Normal, Mild, Moderate, and Severe. The ACT value can span between -4 and 16 dB nCL, which stands for Normalized Contrast Level. This value indicates a client's threshold for detecting speech-like modulations in noise, compared with normal hearing persons. A higher ACT value means your client will require more support from the hearing aid to effectively hear speech in noise (Santurette & Laugesen, 2023).

ACT value (dB nCL) **-4 to <4**	ACT value (dB nCL) **4 to <7**	ACT value (dB nCL) **7 to <10**	ACT value (dB nCL) **10 to 16**
Severity Level **Normal**	Severity Level **Mild**	Severity Level **Moderate**	Severity Level **Severe**

Here is what you will you will see on your Oticon Genie 2 screen:



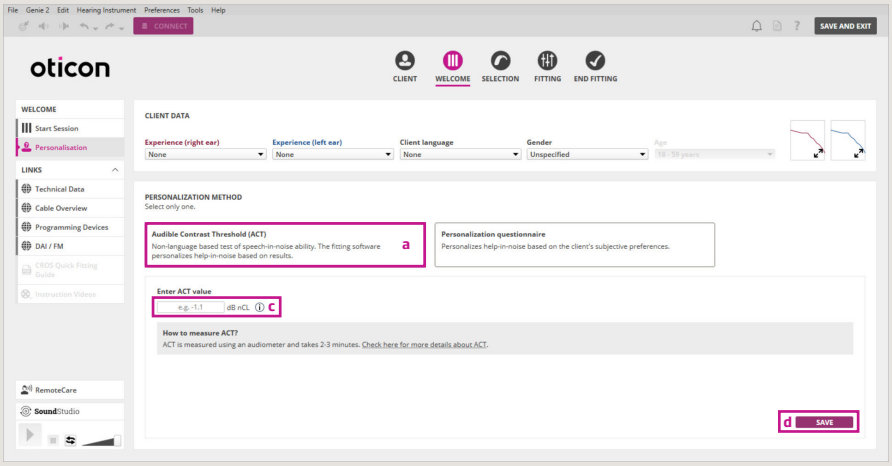
How to use ACT

Once your client's ACT value has been determined, you will have the option of selecting ACT-based personalisation during the fitting. The ACT value will be visible in the personalisation screen in Genie 2. The automatic or manual integration of the ACT prescription into Genie 2 will allow for a personalised first fit with the necessary input to prescribe gain and help-in-noise for your client's unique needs. You will still be able to fine-tune if needed, based on client feedback.

In ***SELECTION***, complete the following steps:

1. Go to ***Personalization.***
2. A) If the ACT value is automatically integrated, ***Audible Contrast Threshold (ACT)*** will be selected as the ***PERSONALISATION METHOD.***

   B) If the ACT value was not automatically imported from NOAH, ***Personalisation questionnaire*** will be selected by default. You will need to manually select ***Audible Contrast Threshold (ACT) (a)***. Then, select ***edit value (b)*** and manually enter the ACT value by typing it in the designated box ***(c)*** and clicking ***SAVE (d)***.



3. If you have automatic integration of the ACT value and measure a new value again at a later date, the new value is saved in NOAH and automatically transferred into Genie 2, replacing the older value. If you do not have automatic integration, you can re-enter a new value manually by selecting ***EDIT VALUE (a)*** and clicking ***SAVE***. Previous ACT values are shown in previous fitting sessions only. If you introduce a new audiogram and new ACT value, both the gain and help-in-noise settings in MSI are re-prescribed; however, if introducing a new ACT value only, the gain is retained while help-in-noise settings are re-prescribed. In both cases, Genie 2 will alert you to the fact that the hearing aid settings will be re-prescribed.

Counselling considerations

The ACT value serves as a pre-fitting consideration, as one of many factors that you should consider when choosing the appropriate hearing aid for your client. Knowing the client's ACT value can also help build confidence in knowing when assistive listening devices and counselling tools can be a valuable addition to a hearing solution.

- For a client with a severe ACT value, counsel on effective communication strategies and set realistic expectations for hearing rehabilitation (Løve et al., 2023).
- For a client with a moderate or severe ACT value, consider an EduMic, ConnectClip, TV Streamer, telecoil options, and/or other accessories.
- For all ACT values, counselling is a vital step; explaining the reasoning behind the ACT test and its implications will ensure a smoother experience for your client. There are four areas of the clinical rehabilitation flow where ACT can help counsel:
    1. Diagnostic counselling
    2. Needs and hearing solutions counselling
    3. Hearing aid fitting counselling
    4. Rehabilitative counselling

For more information on counselling for different ACT value severities, see Løve et al (2023).

References:

[1] https://www.oticon.global/act

[2] Santurette, S., Laugesen, S. (2023). Audible Contrast Threshold (ACT™). Oticon white paper. Retrieved from oticon.global/evidence

[3] Løve, S., Wang, A.M., Ghamkhar, M. (2023). Fitting and Counselling with Audible Contrast Threshold (ACT™). Oticon white paper. Retrieved from Oticon.global/evidence

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