

Oticon Government Services

Audible Contrast Threshold (ACT™) How-to Guide

What is ACT?

ACT addresses the number one complaint from people with hearing loss: hearing speech in noisy situations. ACT is a quick test (average 2 minutes!) performed at the time of the audiogram. With ACT, you can **measure the quality of hearing** and not just the level of hearing. In addition to personalizing MoreSound Intelligence™, obtaining an ACT value will support you while you counsel patients on realistic expectations and recommend accessories.

ACT in greater detail

ACT is an above-threshold, language-independent diagnostic test that is used to measure a patient'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 patient's audibility, the ACT value reflects the patient's hearing-in-noise ability. The single ACT value measured per patient 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 personalizes MoreSound Intelligence settings in the hearing aids to support your patient'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 emphasized 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 patient'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 patient's threshold for detecting speech-like modulations in noise, compared with normal hearing persons. A higher ACT value means your patient will require more support from the hearing aid to effectively hear speech in noise (Santurette & Laugesen, 2023).

Obtaining ACT software
ACT software is available for Government Services clinics (VA, DOD and Indian Health) at no charge. To obtain this software, please contact your calibration specialist (eg. E3). If additional support is needed, please contact your Oticon Account Manager.
Compatible Oticon Hearing Instruments
Oticon Intent™
Oticon Real™
Compatible Audiometers
Interacoustics Affinity Compact
Grason-Stadler AudioStar Pro Version 2
MedRx AVANT ARC, AVANT A2D+, AWRC, and AVANT (Stealth)

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

How to use ACT in Genie 2 software

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

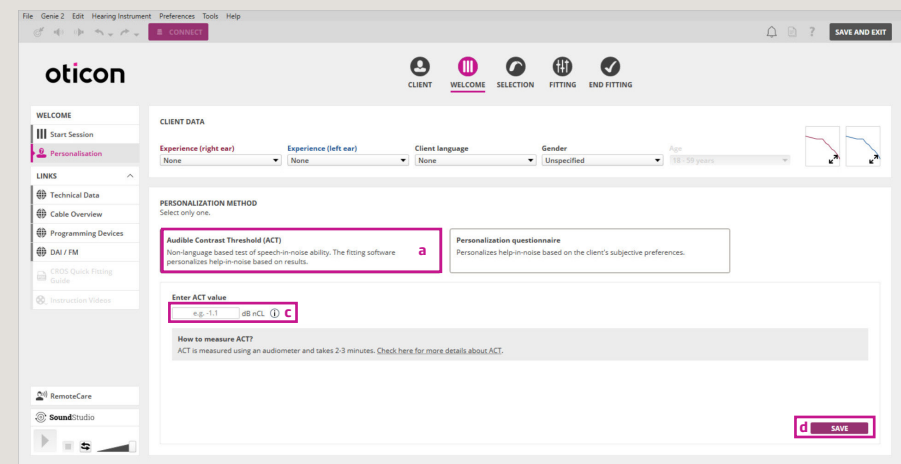
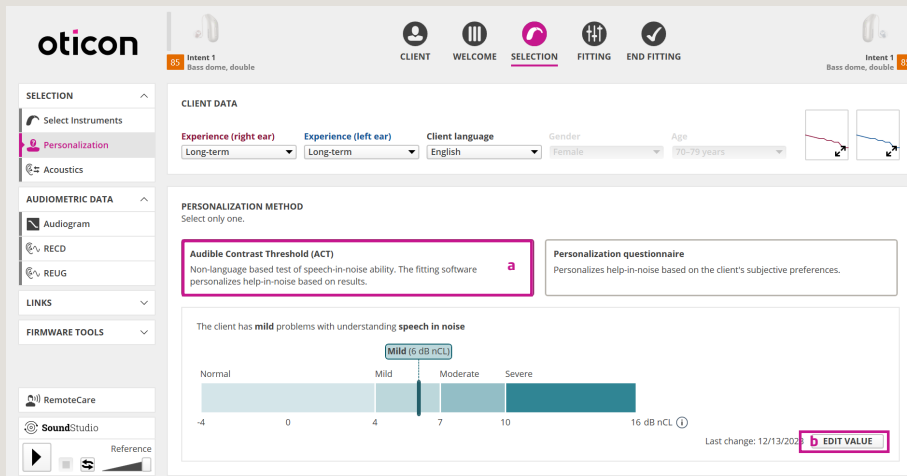
In **SELECTION**, complete the following steps:

1. Go to **Personalization**.

2. A) If the ACT value is automatically integrated, **Audible Contrast Threshold (ACT)** will be selected as the **PERSONALIZATION METHOD**.

B) If the ACT value was not automatically imported from NOAH, **Personalization 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)**.

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



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 (b)** 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.

Counseling considerations

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

- For a patient with a severe ACT value, counsel on effective communication strategies and set realistic expectations for hearing rehabilitation (Løve et al., 2023).
- For a patient with a moderate or severe ACT value, consider an EduMic, ConnectClip, TV Adapter, telecoil options, and/or other accessories.

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

References:

Santurette, S., Laugesen, S. (2023). Audible Contrast Threshold (ACT™). Oticon white paper. Retrieved from oticon.com/professionals/thought-leadership/act

Løve, S., Wang, A.M., Ghamkhar, M. (2023). Fitting and Counseling with Audible Contrast Threshold (ACT™). Oticon white paper. Retrieved from oticon.com/support/downloads