

Audiological fitting bulletin no. 57

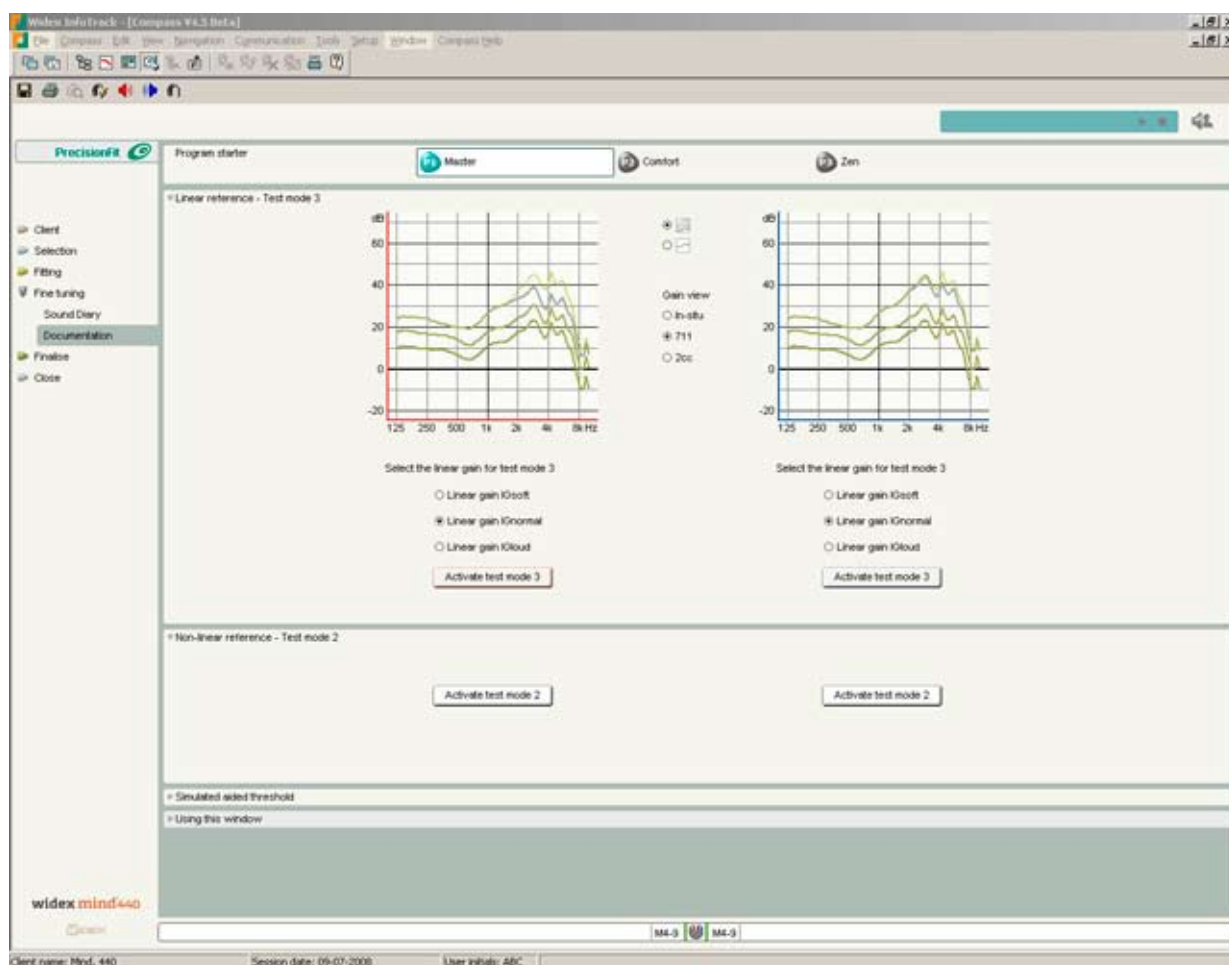
Using the Documentation window and test modes 2 and 3 in
Compass V4.5

News from Audiological Research and Communication

This bulletin describes how to use the Documentation window in Compass V4.5, and the descriptions refer to the options in this window. Please refer to Compass in order to see the details of the screen. Remember that Compass offers several help functions to explain the different options in the program: Tooltips, Using this window panels and the help manual.

When you have finished fitting and fine tuning the hearing aids for your client, you can use the Documentation section of Compass to document or verify the performance of the hearing aid. In this part of Compass you cannot adjust any hearing aid parameters. The Documentation section can only be used to examine the result of the individual fitting in terms of aided performance in your client's ear or on a coupler. The hearing aid is always active in the Master program in the Documentation window and the graphics will refer to the performance of the Master program.

All fittings that are done using the Sensogram and Feedback test in Compass take into account the individual acoustics in the earmould and ear canal of your client. All graphics in Compass will be based on the data that are used in the fittings and can therefore be trusted as a picture of the gain that your client will have at the eardrum.



The linear reference of an m4-9

Linear reference – Test mode 3

If you want to make your own measurement of how the hearing aids are performing in the ear of your client, it is recommended to set the hearing aid in a linear mode and compare the result with the linear reference graphics. Setting the hearing aid in a linear mode ensures a more reliable measurement result without interference from the hearing aids' adaptive features or factors related to choice of measurement equipment.

Test mode 3 is a temporary hearing aid setting that sets the hearing aid in a linear mode with insertion gain corresponding to IGLoud, IGnormal and IGsoft. The adaptive features are disabled. The graphics show the simulated performance in gain versus frequency at the eardrum, in a 711 coupler and in a 2-cc coupler. The simulated graphics are what you should expect if you are doing your own real-ear-measurements on a separate system.

Select the linear gain level you want to verify. Then click *Activate test mode 3* to activate the test mode setting in the hearing aid. The hearing aid must be online when you activate the test mode, and it must stay online while you perform the test. The test mode setting remains active in the hearing aid until you select *Stop test mode 3*.

Non-linear reference – Test mode 2

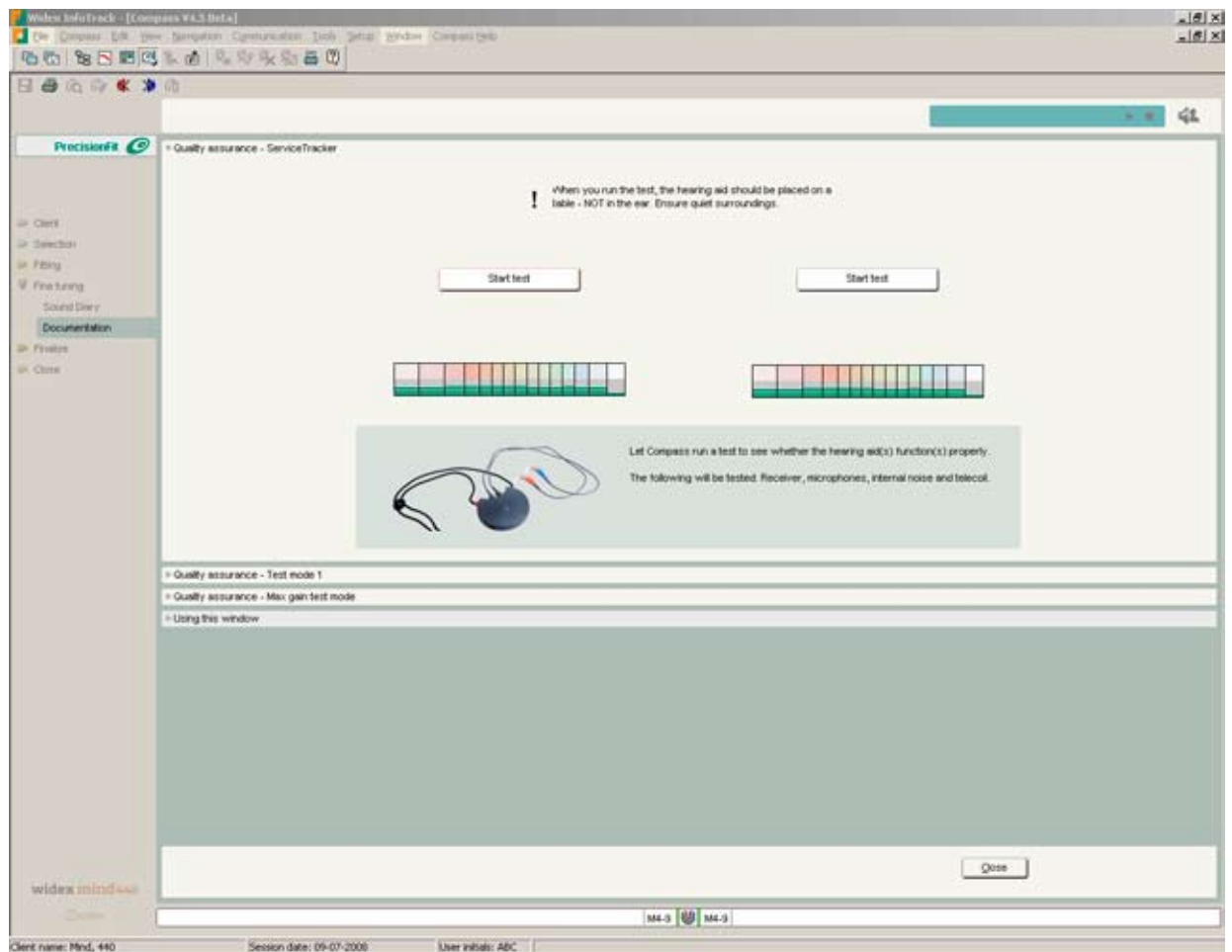
Test mode 2 is intended for individual quality inspection and documentation of the current fitting. The hearing aid is set to an individual nonlinear mode and the regulation speed is very fast. The Speech and noise mode and the Feedback cancelling mode are turned off, and the Microphone mode is set to *High definition Locator omnidirectional*.

Simulated aided threshold

Aided thresholds provide information about the softest sound that the user can hear while wearing hearing aids. In nonlinear hearing aids, the aided thresholds cannot be predicted easily from insertion gain values, since the gain level for very soft sounds is likely to be significantly higher than the gain corresponding to typical input levels used in real-ear measurements. The Simulated aided threshold panel shows the simulated aided thresholds for the four basic bands in the hearing aid (500 Hz, 1000 Hz, 2000 Hz, 4000 Hz). The aided thresholds are calculated from the Sensogram thresholds and all individual fitting data.

Quality assurance

The quality assurance tools for mind440 include the ServiceTracker, Test mode 1 and the Max gain test mode. Quality assurance is accessed by selecting the Quality assurance icon in the Compass toolbar, which is available whenever the hearing aid is online in Compass.



The Quality assurance icon is found in the Compass toolbar

The ServiceTracker allows you to test the integrity of the hearing aid. After testing the microphones, the receiver, the internal noise level and the telecoil, Compass informs you of the test result and, if a problem was found, suggests possible solutions. Note that during the test very loud sounds are produced by the hearing aid. Therefore, the hearing aid should always be placed on the table, never in the client's ears.

Test mode 1 is a temporary hearing aid setting for coupler or Kemar/HATS measurements intended for quality inspection and objective performance checks. Test mode 1 should never be activated with the hearing aid in the client's ears. The performance measured with the hearing aid in Test mode 1 can be compared to the data sheet. When Test mode 1 is activated, the hearing aid is set in a linear mode with a fixed gain level, so that the hearing aid is saturated when making an OSPL90 measurement. You can select *Omnidirectional microphone* or *Telecoil*. The following features are disabled in Test mode 1: Speech and noise mode, Feedback cancelling, microphone squelch, and AOC.

The Max gain test mode is a temporary hearing aid setting which allows you to measure the maximum obtainable gain level for the specific hearing aid model. The following features are disabled in Max gain test mode: Speech and noise mode, Feedback cancelling, microphone squelch, and AOC. The microphone mode is set to *High Definition Locator omni*.