

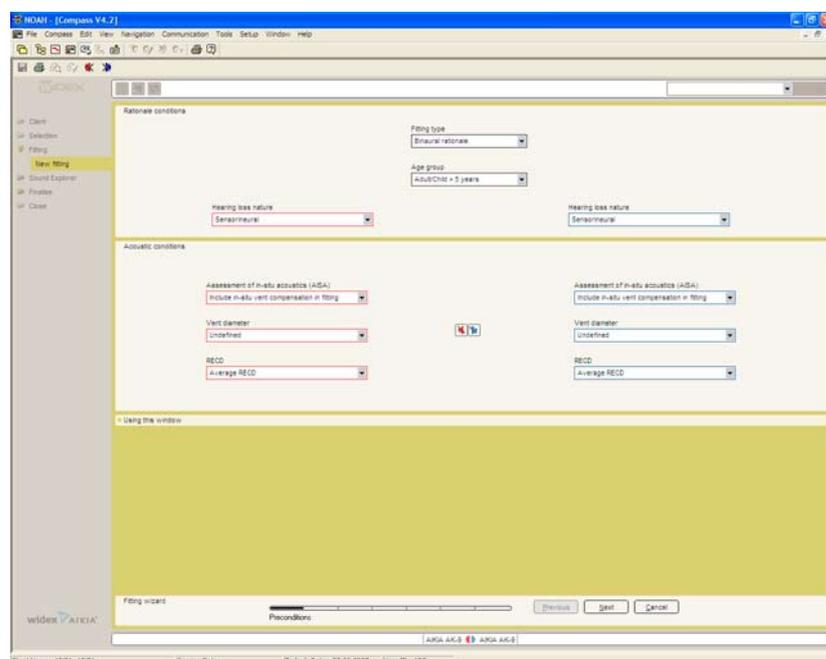
## Audiological Bulletin no. 19

Making the right choices in the Fitting wizard  
when fitting AIKIA with Compass

News from Audiological Research and Communication

The fitting procedures for the ISP hearing aids (Inteo, AIKIA and Flash) in Compass are similar to each other. If you have already fitted an Inteo, you will recognise the steps and procedure in the fitting of AIKIA. This bulletin describes the four main steps in fitting AIKIA with Compass V4.2. The descriptions refer to the options in the Fitting section in Compass including the Preconditions, Sensogram, Feedback test, and Program manager windows. 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.

## The first step - Preconditions



The first step in the Fitting wizard is to define fitting preconditions. Most of the parameters in the Preconditions window have been preset based on the age and audiogram data stored in NOAH/InfoTrack, but if desired, they can be changed.

### Fitting type

If you have connected two hearing aids, Compass will automatically select the binaural rationale. If only one hearing aid is connected, the monaural rationale will be selected. The latter will result in a slight increase in amplification to compensate for the loss of binaural summation.

### Age group

The age group is automatically pre-set based on the age information stored in NOAH or InfoTrack. If an age younger than five years is selected, the paediatric rationale will be used to ensure that the smaller ear canal in young children is taken into account in the fitting. An extra step will be added to the Fitting wizard, allowing you to indicate audiogram transducer information.

### **Hearing loss nature**

The type of hearing loss (Sensorineural or Conductive/Mixed) is automatically selected based on the audiogram information stored in NOAH/InfoTrack. If a conductive/mixed hearing loss is indicated, the AIKIA rationale will automatically compensate for the conductive component with less compression and more gain.

### **Assessment of in-situ acoustics**

In Compass V4.2 and later, you can choose how the AISA should be used; the default setting is “Including in-situ vent compensation in fitting”, but you have three choices.

**Include in-situ vent compensation in fitting:** This choice uses the results of the AISA vent effect assessment for gain compensation in the fitting. The gain and output graphics include gain compensation, all reflected and displayed in the performance graphics. The Sensogram is displayed as an AISA Sensogram in the SoundTracker and speech spectra views (in-situ vent effect is included). The gain and output graphics include the in-situ vent effect and gain compensation, as well as the effect of the vent-transmitted sound path.

**Display assessment results only:** Displays the results of the AISA vent effect assessment. No compensation is applied in the fitting. The gain and output graphics include the in-situ vent effect and the effect of the vent-transmitted sound path.

**Ignore AISA (off):** Neither displays nor compensates for the vent effect. All performance graphics assume a completely unvented shell/earmould (0 mm).

### **Vent diameter**

You can indicate the size of the physical vent in the hearing aid. An asterisk (\*) next to one of the diameters indicates that this is the vent size recommended by Widex for the particular hearing loss. The AIKIA rationale will automatically compensate for the impact of the vent in the fitting. This ensures that the output of the hearing aid at the eardrum is always the output prescribed by the AIKIA fitting rationale. The default setting of the vent size is “Undefined”. Note that when you fit an AIKIA élan, the vent diameter will always be fixed as “élan ear-set”. An extra step will be added to the Fitting wizard allowing you to indicate the specific ear-set sizes selected.

### **RECD**

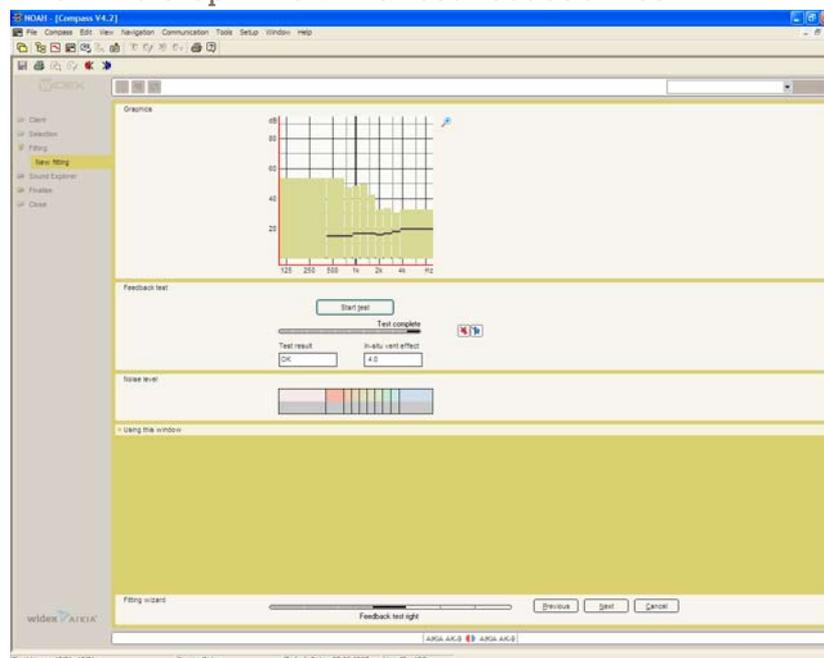
The real-ear-to-coupler difference indicates how much the individual ear canal acoustics differ from the acoustics of a standard coupler. These values are used in the calculation of gain to ensure the right amount of amplification at the eardrum. Since AIKIA is fitted using in-situ audiometric measurements (the Sensogram), the individual differences in ear canal size are, to a large extent, taken into account. However, if desired, you can choose to include individually measured RECD values in the fitting. If you select this option, two extra steps will be included in the Fitting wizard, allowing you to indicate data from the RECD measurements.

### The second step – the Sensogram

The second step in the Fitting wizard is the Sensogram. The Sensogram is an in-situ audiometric measurement in which the user's hearing thresholds are measured through the hearing aid. Place the cursor in one of the value fields, click once and use the arrows to set the level of the test tone. Press the *Tone* button to activate the tone.

Once the thresholds in the four basic bands (500, 1000, 2000 and 4000 Hz) have been measured, you can also measure the Sensogram threshold at 250 Hz by choosing the *Measure 250 Hz* option. If the earmould or shell is fitted with a vent, it can be particularly useful to measure the thresholds below 500 Hz, as this will enhance the precision of the AISA strategy.

### The third step – the Enhanced feedback test



The third step in the Fitting wizard is the Enhanced feedback test, which serves to initialise the Active feedback cancelling feature in AIKIA. This system ensures that more gain (SuperGain) can be provided for the individual fitting without increasing the risk of feedback. If the available gain (measured gain limit + SuperGain) is sufficient to amplify normal conversational speech as prescribed by the AIKIA rationale, an “OK” will be displayed in the Test result value field. If not, “\*\*\*” will be displayed, indicating that the feedback test is not OK, either because the physical fit of the hearing aid/earmould is not acceptable, or because background noise interfered with the measurement. You should not proceed with the fitting until you have an accepted feedback test indicated by “OK”.

The enhanced feedback test is also used to assess the in-situ acoustics if you have chosen this option in Preconditions for the hearing aid fitting. This is expressed as the in-situ vent effect in the Feedback test window. The in-situ vent effect is defined as the equivalent vent size in an average ear with an average earmould. Once measured, the in-situ vent effect replaces the physical vent size selected in the Preconditions window to ensure an even more precise compensation for the loss of amplification associated with ventilation/leakage.

### **The fourth step - the Program manager**

The fourth and last step in the Fitting wizard is the Program manager. Here you are allowed to select the number and types of programs you wish to enable in the hearing aids.

You have now concluded a successful fitting with the AIKIA hearing aids and you can proceed to Sound Explorer to evaluate the fitting.