

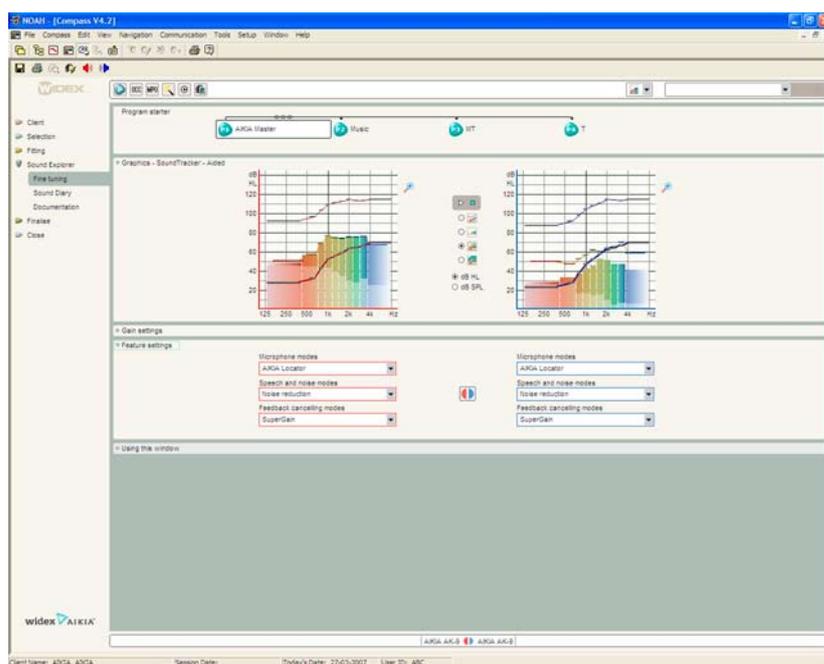
Audiological Bulletin no. 22

Changing the feature settings in AIKIA fittings
using Compass V4.2

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 features you can change and how to do it using Compass V4.2. The descriptions refer to the feature setting options in the Fine tuning window in the Sound Explorer section. The feature setting may be changed for the microphone mode, the speech and noise mode and the feedback cancelling mode. 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 feature settings may be changed individually for each of the listening programs in AIKIA. Such changes are easily made in the Feature settings panel in Sound Explorer in Compass. In this panel you may change the mode in which the microphone works, the mode in which speech and noise is handled in the hearing aid and the mode in which acoustic feedback is handled in the hearing aid.

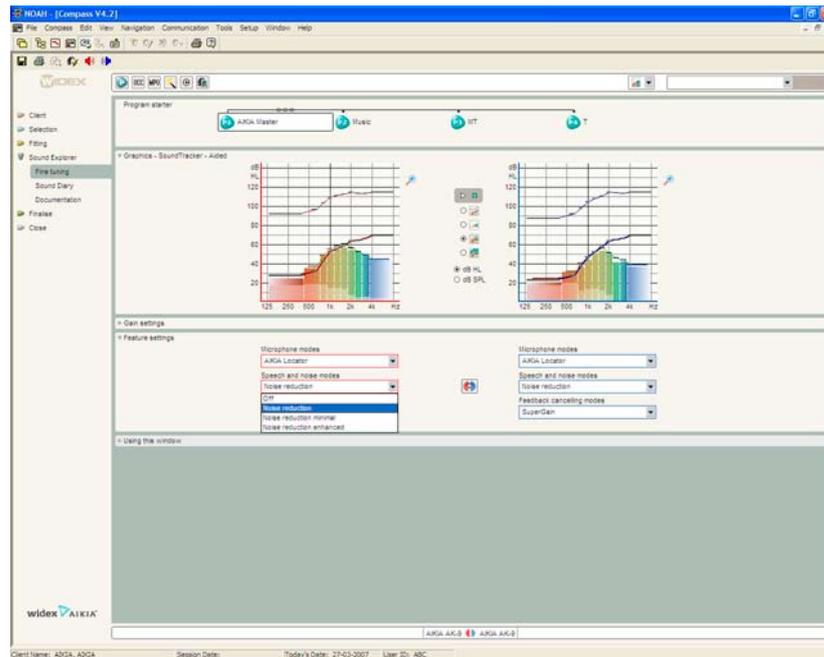


Microphone mode

The Microphone mode can be set to one of four settings: The default setting in the Master program is **AIKIA Locator**. The **AIKIA Locator** is a 10-channel fully adaptive directional microphone system that exploits frequency-specific information about the listening environment to improve the signal-to-noise ratio. The **AIKIA Locator** can also be set to **AIKIA Locator dir** (fixed directional characteristic) and **AIKIA Locator omni** (fixed omnidirectional characteristic). We recommend that these two modes are primarily used for demonstration purposes. The **AIKIA Locator** can also be turned off.

Speech and noise mode

The Speech and noise mode can be set to one of four settings. The noise reduction used in AIKIA is Widex classic noise reduction. The default setting in the Master program is **Noise reduction**. Other settings are **Noise reduction minimal** and **Noise reduction enhanced**. Finally, you can choose to deactivate the Speech and noise mode altogether using the setting **Off**.



Noise reduction

In this setting the noise reduction system operates as originally described with optimisation of the signal-to-noise ratio in the ten channels. The maximum attenuation that can be achieved in each channel is 14 dB. Different noise levels in different bands trigger the noise reduction system. These levels range from 19-31 dB SPL. The maximum effect of the noise reduction algorithm is reached for noise input levels in each band ranging from 65 to 71 dB SPL. The net effect of this setting is that maximum comfort is provided in noisy environments and good speech quality is ensured when speech is present in noise.

Noise reduction minimal

In this setting the noise reduction system is activated for a louder overall level of background noise compared to the normal setting. The noise reduction system is less active and the maximum attenuation that can be achieved in this setting is 8 dB. Different noise levels in different bands trigger the noise reduction system. These levels range from 20-35 dB SPL. The maximum effect of the noise reduction algorithm is reached for noise input levels in each band ranging from 70 to 80 dB SPL. The effect of this setting is less noise reduction in noisy environments.

Noise reduction enhanced

In this setting the frequency shaping of the noise reduction algorithm is slightly different compared to the normal setting. The system is more active in the lower frequencies and less active in the higher frequencies. The maximum attenuation that can be achieved in this setting is 14 dB. In this setting the SIS function is less active. The noise reduction system is triggered at given noise levels in the dif-

ferent frequency bands. These range from 19-31 dB SPL. The maximum effect of the noise reduction algorithm is reached for noise input levels in each band ranging from 64 to 92 dB SPL. The net effect of this setting is that it provides more comfort in noisy environments compared to the normal setting.

Noise reduction off

The noise reduction can also be deactivated by choosing “off”.

Feedback cancelling modes

The AIKIA Active feedback cancelling feature integrates knowledge of the acoustic properties of the hearing aid in the ear with directional sensitivity for each of AIKIA’s ten frequency channels. Its mode of operation can be set to one of four settings. The default setting of the Feedback cancelling mode in the Master program is **SuperGain**, meaning that the hearing aid gives as much gain as possible without the risk of whistling. You can use the drop-down list to change the setting to **SuperGain music**, especially designed for listening to music. You also have the option to turn the feedback cancelling system **off** altogether, in which case an extra adjustment parameter will appear. This parameter allows you to adjust the static max gain limit across frequencies in case of whistling. Deactivating the feedback cancelling feature is only recommended in fittings with considerable headroom in the maximum available gain without feedback. Otherwise recurring acoustic feedback may be a considerable problem for your client.