Case Study

Delta Fitting Rationales

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There are two primary fitting rationales which apply to Delta: Clarity and Voice Aligned Compression (VAC).

The Clarity rationale assumes a mixture of direct (unamplified) and amplified sound, fusing together within the ear canal, in essence creating an open ear canal "fusion fitting". Clarity provides enhancement for speech sounds across the second speech formant (F2) with emphasis from about 2000 to 5000 Hz. The modest compression and gain available through Clarity are beneficial for patients with mild-to-moderate, mid-and-high frequency sensorineural hearing loss.

The VAC rationale assumes that the hearing aid will provide the entire acoustic signal. This rationale provides three levels of gain control, more gain for softer sounds (compared to Clarity), more compression in the mild through moderate range, more gain in the mid-frequencies and the ability to add gain and directionality actively in the low frequencies.

Clarity Rationale and Coupling:

General Trends

There are many advantages associated with true open fittings. Open fittings using the Clarity rationale should be used whenever possible.

The most common open fitting benefits are: the ability to instantly fit the patient, improved localisation, improved sound quality and of course, a reduction in the occlusion effect.

If the patient's hearing is 30 dB or better in the low frequencies (LFs), it is best to choose Clarity and an Open Dome for the initial fitting.

If the patient is an experienced hearing aid user and reports problems with not enough loudness or difficulty hearing soft speech in quiet, it is probably best to try the VAC rationale. You may also need to try the Micro Mould from Oticon or a custom mould with Select-A-Vent (SAV).

If the patient is an experienced hearing aid user and reports problems with not enough loudness or difficulty hearing soft speech in quiet, it is probably best to try the VAC rationale

If feedback occurs with Clarity and an Open Dome, try the Plus Dome. If feedback still occurs, an Oticon Micro Mould or custom mould with a SAV may provide feedback relief.

If physical retention in the ear is a problem, that is, if the Open Dome or Plus Dome migrate out of the ear canal, a custom mould with open venting is a good solution.

VAC Rationale and Coupling:

General Trends

If the hearing is worse than 30 dB in the LFs, the VAC rationale is usually the best choice. If the provision of an instant fitting is desirable, use the Plus Domes. If acoustic feedback becomes a problem, try either the Oticon Micro Mould or a custom mould with an SAV.

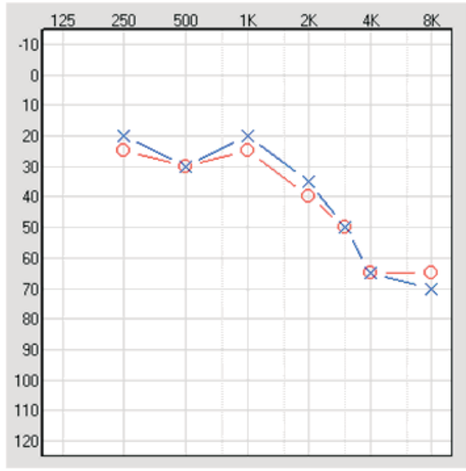
Please note that if you already have a supplier of excellent custom moulds, we encourage you to maintain that relationship. If you are looking for a new or additional source for custom moulds, you might consider the Oticon Micro Mould as a potential solution.

For patients beyond the fitting range of Delta and for patients with a specific need for a telecoil, volume control wheel or multiple programs, consider Syncro, Safran, Tego, or Tego-Pro as good alternatives. The Corda "thin tube" option tends to significantly improve the cosmetic appeal of most BTE fittings (even power versions) and when a Corda is connected to a custom SAV earmould, it performs very well across the entire fitting range.

Sample Cases

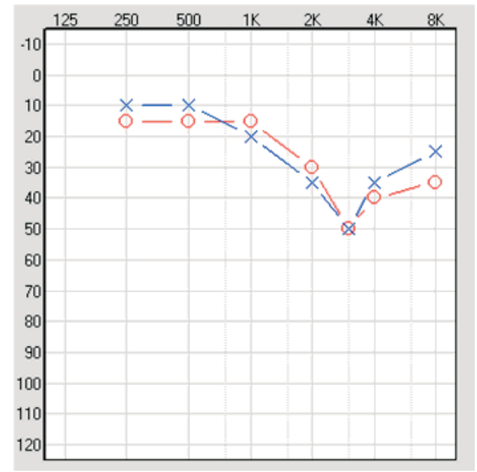
Patient One
Patient One is a 55-year-old businessman (see figure below). He was fitted approximately two years ago with binaural Syncro BTE's. Although he has been essentially pleased with his two Syncros, he admits he has not always worn them, mostly because of how they look. Recently, he asked his audiologist if it would be possible for him to wear Deltas.

Analysis
Two factors make him an excellent candidate for the VAC rationale and a Micro Mould. Firstly, he has a mild hearing loss in the low frequencies. Even though some patients would be happy with an open fitting to accommodate this hearing loss, this patient, who already has experience with a closed fitting, has had no issues occlusion. Secondly, the patient has adapted to the fuller sound quality of the VAC fitting in Syncro. Therefore, he would probably have a hard time adjusting to the relatively lighter loudness and lesser fullness appreciated via the Clarity fitting.



Patient Two
Patient Two is a 58-year-old housewife (see audiogram below). Although she was fitted with Syncro BTEs with Corda thin tubes about 5 weeks ago, she recently saw an ad for Deltas in her local newspaper. She was previously happy with the sound quality of the Syncros, but lately has become concerned about cosmetic issues. She told her audiologist a few days ago, "I want the cool looking hearing aids that I saw in the paper."

Analysis
Even though this patient has been wearing Syncros with Cordas, her good hearing in the LFs indicates she'll do very well with Delta using the Clarity rationale.



Her audiologist should start with Delta 8000s with an Open Dome fitting. ■