

Questions and Answers – MoreSound Intelligence

January 2021

QUESTION	ANSWER
Is Oticon More compatible with CROS/BiCROS?	No; Oticon CROS uses the OpenSound navigator for noise reduction and More uses MoreSound Intelligence and the DNN.
If the client states to the HCP that ALL environments are Difficult (in the Environment Configuration), then what happens with the Neural Noise Suppression-Difficult setting of 8 dB for example – how is that applied in this situation?	The default or selected level of the Neural Noise Suppression- Difficult represents the maximum level of noise suppression applied in environments with a poor SNR and high overall noise level. In other ‘difficult’ situations with less background noise, less noise suppression will be applied.
Does Oticon recommend still using the personalization questions with the client’s aids if fitting an Opn S user with Oticon More?	Yes! The default settings in the MoreSound Intelligence (MSI) tools in Genie are based on the answers to the Personalization questions whether the patient is a new or experienced user. In 80% of the fittings, the MSI default settings in Genie will be very appropriate for the user.
For fine-tuning, should we focus more on the Bands or the MoreSound Intelligence (MSI) tools?	It depends on the user’s complaint. The Fine Tuning tools (bands) for gain and MPO operate just as you know from Opn and Opn S. The MSI tools relate to the user’s performance in easy and difficult speech-focused environments, and the Fine Tuning controls relate to audibility for soft, moderate and loud in the available frequency bands; both can affect the user’s comfort and can be used to improve specific complaints. Just remember, changes to some of the MoreSound Intelligence tools/controls can affect ALLsimple or easy environments, and the fine tuning controls can be adjusted to only affect specific environments or frequencies.
Does the Deep Neural Network (DNN) keep learning when worn by the user?	No, it doesn't. We need to be able to control the training of the DNN to make sure it works optimally, so it is only trained in the development phase. This way, we ensure that the DNN is neither undertrained, nor over trained which would lead to inferior processing of sounds in the environment.
Is Oticon going to let the Deep Neural Network (DNN) in Oticon More to learn or train in the future to make the process even better and update the result through firmware updates?	At this time there is no plan in the near future to add new trainings to the DNN chip. Technically this is possible, and it is an option we are exploring. However, we have a high degree of confidence in the learning and optimization process that we used during the development phase. We do believe that the original training was very thorough with the proper balance between overtraining and undertraining the DNN.
Referring to your chart diagram of the More product, it seems that the sound was not processed in 64 channels?	The overall processing works in 64 channels in More 1, and 48 processing channels for More 2 and More 3. The signal processing, which makes the most important difference for the hearing aid, has been updated and now works in 24 frequency channels and up to 10kHz for Oticon More 1; 20 fitting bands and up to 8kHz for Oticon More 2; 18 fitting bands and up to 8 kHz for Oticon More 3.

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	Oticon More 1	Oticon More 2	Oticon More 3	
Speech Understanding	MoreSound Intelligence™	Level 1	Level 2	Level 3
	- Environment configuration	5 Options	5 Options	3 Options
	- Virtual Outer Ear	3 Configurations	1 Configuration	1 Configuration
	- Spatial Balancer	100%	60%	60%
	- Neural Noise Suppression, Difficult / Easy	10 dB / 4 dB	6 dB / 2 dB	6 dB / 0 dB
	- Sound Enhancer	3 Configurations	2 Configurations	1 Configuration
	MoreSound Amplifier™	•	•	•
	Feedback Prevention	MoreSound Optimizer™ & Feedback shield	MoreSound Optimizer™ & Feedback shield	MoreSound Optimizer™ & Feedback shield
	Spatial Sound™	4 Estimators	2 Estimators	2 Estimators
	Soft Speech Booster	•	•	•
Frequency lowering	Speech Rescue™	Speech Rescue™	Speech Rescue™	
Sound Quality	Clear Dynamics	•	•	-
	Better-Ear Priority	•	•	-
	Fitting Bandwidth*	10 kHz	8 kHz	8 kHz
	Bass Boost (streaming)	•	•	•
	Processing Channels	64	48	48
	Fitting Bands	24	20	18

<p>Does the MoreSound Booster shift the process to apply high noise reduction just like open sound booster does?</p>	<p>The MoreSound Booster works similarly to the OpenSound Booster in these ways: it is applied only by the user through the ON app; it works in more quiet environments; but the MoreSound Booster will give the user a 4dB improvement in Signal-to-noise ratio (only a 3dB improvement was available with OpenSound Booster). If however, the Neural Noise Suppression – Easy is <u>already</u> set to 4dB in Genie, there is no additional benefit for the user with the Booster in the ON app.</p> <p>MoreSound Booster does NOT help more in the most difficult listening environments, such as a busy restaurant or cocktail party. In those situations the prescribed settings will, for most users, provide the maximum help.</p>
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<p>Does it mean that the booster manually overrides the DNN simple from 0 -> 4dB ></p>	<p>Yes! If the user chooses to activate the MoreSound Booster in a fairly quiet environment, and the default setting of the Neural Noise Suppression- Easy is set at 0dB, then the user will have a 4dB reduction by the DNN, and with more front focus from the Spatial Balancer function (non-speech sound sources, especially from the back and sides, are reduced more).</p>
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<p>Within the MoreSound Intelligence tools screen in Genie, can we still select Omni or Full Directional?</p>	<p>Yes; these are 2 options in addition to the default Neural Automatic setting. Full Directionality applies full forward directionality in all listening situations. This setting can be used in other programs as well. Fixed Omni applies open omni directionality with the added natural slight forward effect of the pinna in all listening situations. This setting can be used in other programs as well.</p>
<p>How do we adjust the Environment Configuration in Oticon More?</p>	<p>This is the primary control for MoreSound Intelligence. It allows you to set the range of conditions over which the system will be using directional activity and noise removal to assist the patient. Because of the natural patient-to-patient difference in the effect of hearing loss, some patients may need this help over a broader range of environments. The default for the Environment Configuration is MODERATE as the ‘transition’ situation where the client has difficulty.</p> <p>If desired, you can manually adjust the Environment Configuration setting from the default setting by clicking on the image of the situation where the user starts to find more challenging on a scale ranging from Very Simple to Very Complex to pinpoint where the MoreSound Intelligence can activate additional settings.</p> <p>For example, if you click on the image of one person (very simple), MoreSound Intelligence will provide the most assistance over the broadest range of environments. If you click on the image with six people (very complex), MoreSound Intelligence will provide the least processing assistance – meaning it will provide assistance in only this limited but noisy condition.</p>

Which situations are Easy or Difficult for your client?

