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Acoustic Intelligence in Connexx 10

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Hi, my name is AmandaReed and I am a clinical education specialist with wsa. Today's course is a quick tips on the new Acoustic Intelligence tab within the Connects 10 software for our new Pure Chargingo Max hearing aids. Acoustic Intelligence is going to be listed here, right where Dynamic Soundscape Processing used to be for prior platforms such as IX AX X. Dynamic Soundscape Processing will still be there, but for Max and moving forward, you'll see this new Acoustic Intelligence tab. When I click in Acoustic Intelligence, you're going to see that I have two different options.

I have sound strategy that we're going to go over in a lot of detail, as well as this Own Voice Processing AI. So if you're familiar with our new chip Max, you'll know that Acoustic Intelligence is the driving force of those four DNNs, our Real Time Conversation Enhancement AI, Own Voice Processing AI, Ambient Scene Analysis, and our Noise Control AI. The Acoustic Intelligence is the puppet master or the sound engineer that is going to provide the perfect blend of all the information received from the four DNNs. So that's why we call this tab Acoustic Intelligence. Let's start with that Own Voice Processing AI.

So as you might know if you've fit Signia hearing aids before, Own Voice Processing is our proprietary way of helping attenuate the patient's own voice. As we know, that can be a barrier and a hurdle that you have to get over with a new patient to allow them to accept their hearing aids. And we've had own voice processing in our hearing aids since the NX platform in 2017 with Max. For the first time ever, the calibration process of, you know, going through the counting in the software with the patient is no longer needed. Own Voice Processing AI was trained on 1.5 million own voices, so that this is on by default out of the box.

For every first fit, you still have this screen. So you have the ability to adjust how much or how little attenuation of the patient's own voice is needed. And you can certainly also turn on voice attenuation or own voice processing off. But of course we would recommend that it is on and we typically say leave it at default or the medium at the first fit. If the patient comes back after that first fit and they're still

bothered by the way that their own voice sounds, you could always move it up to max.

This is more gain reduction or attenuation for the patient's own voice. Vice versa, if they are struggling to hear themselves at that first fit and they're not used to the way that their voice sounds, maybe it's too muffled. You can always drop it down to min. So this would be less own voice attenuation. So hopefully you're really excited about that new own voice processing AI just one step taken out of the fitting for you that you don't have to worry about and the patient is going to benefit right away.

Let's talk about sound strategy, as this is where I would be spending a lot of time at a follow up appointment. So you'll see that we are giving you more options than ever before to be able to make really personalized changes based off of the feedback that you get from the patient after that first fit. So there's a couple of different tabs that I want to take a look at as we kind of orient ourselves to this page. So everything we're doing here is strictly for the universal program or a tinnitus program, as tinnitus programs. Baseline is a copy of the universal and you can see that listed down here.

This is the program that you really want to be very automatic, very adaptive. That's why we reserve this for a universal program. So at the top we have conversation or ambient sounds. And basically we're deciding here, is speech involved or is no speech involved for conversation? Then yes, we are dealing with speech in either quiet noise or soft noise, moderate noise or loud noise.

Ambient sounds is going to be for just noise, no speech or music. And we're going to get into that section next. Start with conversation. So if you, if you fit our previous hearing aids and you've worked with dynamic soundscape processing, this page should look familiar to you. We've had this kind of cartoon with a slider before, but again, really kind of changing the way that we look at this with Max due to all of the extra support available in the hearing aids.

So you have this conversation support slider. This is where all of your algorithms are. This is your noise reduction, your directionality. And it works similarly to how our previous dynamic soundscape processing worked, that as you move this slider towards focus, this is going to increase the amount of noise reduction and maybe make the hearing aids more directional. So more support.

And you can see that the picture depicts that the center, the focus of the picture is going to be stronger and the background is going to sort of fade away. So again, more noise control, more directionality. When we move towards transparency, the opposite is going to happen. Now the background starts to come into view a bit more because we are opening things up a bit. This is less noise control, maybe a little bit more Omni, we're going to let some more things in.

We typically leave this at balance at the first fit and wait to see how the patient does. Now, below that, we have our conversation sound shaping. This is your frequency response. This is similar to in our previous software. You had the equalizer where you can adjust your gain curves.

But for this sound strategy and acoustic intelligence for Max, we again have really simplified things for you to have more of an impact. So instead of you having to decide how much gain you're going to be adding or taking away, we have preset values that were studied and proven to make an impact on the patient's fitting. So the first thing I want you to do when you're making adjustments here is to click the curve graph so you can see your curves and you can see what you're adjusting. Baseline is the little thumbs up here and we can move it from there. So as we move it towards a brighter sound, this is going to be more of a high frequency emphasis and starting to roll off the lows a bit.

Vice versa. As I move towards a fuller sound, it's more of a low frequency emphasis and going to roll off the highs a little bit.

If you are unsure of where your starting point or the default is, you go back to your thumbs up, which is your baseline. Now you could do the same thing for a loud noise. And what's important to note here is that the default is going to change for loud noise. The default is a little bit more towards that brighter sound for a more high frequency emphasis, which makes sense. More speech, more speech support when we're in those louder environments.

Now, what you'll notice is that if I click on soft noise, my conversation sound shaping goes away. So if I close that graph, I can see that I still have the conversation support but no conversation sound shaping, this is okay. That's because when you're in basic and fine tuning in the universal program and you're making gain changes, that is for speech and quiet or speech and soft noise. So we're already making the changes here, no need to make them on this page, but you certainly can still adjust that conversation support. So maybe if the patient says, when I am in quiet and I am trying to hear my spouse, when we're sitting in the living room, I'm struggling to hear them.

We can give them a click up towards focus for soft noise and then any gain changes, I would recommend using your handles within basic or fine tuning for that speech in quiet. Now, if the patient says, when I was in a crowded cafe and I was with a group of my friends. I felt like I was just hearing too much noise, not enough speech, but I'm doing fine and quiet. Quiet speech and quiet is fine. But when I'm in a cafe with a little bit more background noise, I'm struggling to hear my friends clearly again.

I can give them a click up towards focus. And that's when I'm going to go now into this conversation sound shaping. Open that curve graph up and I'm going to give them a click towards brighter sound to give them a little bit more of that high frequency boost to help with speech.

So a lot more flexibility here. As if you remember, with dynamic soundscape processing, you didn't have the ability to split up into these different categories. So now we're allowing even more

personalization for the patient. For a greater impact, let's look at ambient sounds. So remember, this is going to be for noise only.

Your noise where speech isn't involved, or at least speech isn't the focus. You might have some, some background competing speech, but you're not trying to understand it. We're just talking about a noisy environment. Your categories for this are in car noise, urban traffic music, soft environmental noise. And then we also have a general category.

And this would be for. If the noise doesn't fit into any of these specific categories, we would put it under general. So what you'll see is that conversation sound shaping now becomes ambient sound shaping and there's no conversation support. Slider. Why?

Because we're not dealing with speech, we are only dealing with noise. So again, very similar. You have your baseline, you have your nice picture, and you can open up your curve graph. What's going to change for ambient sound shaping is that we're dealing with noise, so we don't necessarily want to make things louder. So what'll change is if I want to move towards a brighter sound in order to emphasize the highs without making things louder.

The way that I do that is to take away the lows and that leads to a brighter sound quality. Vice versa, if I want a fuller sound without making things louder and I want to emphasize the lows, I take away the highs.

So to give you an example, maybe the patient says, when I am in the car, I am hearing way too much road noise. Everything else, everything outside of the car is just way too loud. I am going to open up my curve graph and we already move a little bit towards the brighter sound to try to take away some of the lows. But we can further enhance that.

Now let's look at music, because music is different. Music isn't the same as just general noise. And you can see that we're going to move towards a little bit towards fuller sound to give some more bass. But again, if the patient said, when I'm listening to my records, I just feel like things are a bit too tinny, I'm not getting the bass that I would like, we can continue to move towards that fuller sound.

So that is a quick view of the adjustments that you can make under the sound strategy of Acoustic Intelligence. And hopefully you can see how this will make a big impact on those follow up appointments. A lot of changes that you can make while also not taking a lot of time out of the appointment. Now, I want to point out, even though this is a quick tip on Acoustic Intelligence, there's a lot of different categories here. There's different noise categories.

And in that conversation tab, there's also you having to decide, is it soft noise, is it moderate noise, is it loud noise? And we know that patients aren't always the best reporters of the environments that they're in. So another big improvement to the Connexion software lives under this personalization tab. And you have this new Data Insights page. Now, these hearing aids are first fit, so there is no data here.

But when you connect the hearing aids up to the software after a follow up, this is the first page that's going to come up. And what I want to point out is this new acoustic environment for universal section of the Data Insights page. This is going to break down the percentage of time the patient is in any of these categories. So if the patient said to you, I went out to eat and it was the loudest environment I've ever, ever been in and I was struggling to hear my family at the dinner table, you might think to yourself, all right, I need to adjust for conversations and loud noise. But if you come to this tab and the hearing aid actually classified it as moderate noise, well, that's where we should be making the change.

Because it really matters how the hearing aid analyzes the sound, not as much as what the patient, the category of the sound is in. So in order to make sure that these changes are going to be noticeable by the patient and to make an improvement in their listening experience, we want to use this, that's going

to help us decide what changes or where we should make the changes. So again, that was a quick overview of the big, big updates for the kinext 10 software. I hope you are as excited to get working with this as we are. We have a lot of other classes on audiology, online diving deeper into the product and technology, and other courses on connectivity.

So we recommend taking a look at that. And as always, if you would like more training, please reach out to a member of your WSA team and we would be happy to get those trainings scheduled for you. Thanks again.