



Live Speech Mapping

Clinical Speech Mapping

Speech Mapping is proven to provide extremely accurate verification of what a hearing instrument is actually delivering in amplification to a specific patient's TM with their reduced dynamic hearing range. It is a true measurement of insitu hearing instrument performance and not based on formulas, averages or predictions.

Why Does Speech Mapping Work?

Probe microphones are sensitive calibrated devices that account for specific anatomical differences in ear canals (length, width, resonance characteristics, TM flaccidity, depth of hearing aid insertion and device sound processing capabilities) to ensure accurate and precise analysis of the prescribed fitting.

Speech Mapping utilizes familiar sounds (real speech), not manufactured or artificial stimuli.

Speech Mapping eliminates predictive uncertainty of manufacturer recommended "first fit" algorithms or formulas based upon averages.

Speech Mapping engages both the patient and the 3rd party in an understandable process, increasing acceptance and acknowledgment of the scope of the loss and the goal of the hearing instrument.

Pre-Test Suggestions

Ensure that the spouse or significant other joins the patient during the speech mapping analysis by the professional

Have a copy of the Rainbow Passage available for the 3rd party to read (a copy is printed on page 2)

Briefly provide an overview of the goals of the speech mapping analysis

LSM - A Clinical Protocol

- STEP 1:** Situate the patient and the 3rd party so that they can comfortably and conveniently observe the computer monitor screen.
- STEP 2:** Install new probe tubes on the probe microphones and calibrate them for each new patient.
- STEP 3:** During the initial hearing exam, the clinician should record UCLs for tones as well as thresholds for inter-octave stimulus levels
- STEP 4:** Carefully insert the probe microphone tubes in the right and left ear canals, just past the second bend in the canal or slightly beyond the tip of the earmold
- STEP 5:** With the probe tubes properly placed, insert the patient's hearing aid(s) after connecting to the fitting software. Have the aids turned off for insertion.
- STEP 6:** Open the AVANT REM Speech Live Speech Mapping Screen within NOAH and allow the patient to observe the screen. Open NOAH first and then select Real Ear Measurement to open the AVANT software Turn the hearing aid on to observe the amplification characteristics in the patient's ear. Press the Green Start button to begin measuring
- STEP 7:** At this point, it is important to explain the audiogram: the patient's thresholds, UCLs, and the relevance of the modified "speech banana".
- STEP 8:** Select a test ear, and turn on the probe microphone presenting speech at 65dB, observing the sound pressure level meter

at the top of the screen to ensure you are speaking at a conversational level. Observe the amplification characteristics to determine which frequencies need to be adjusted

STEP 9: Turn the probe microphone off and “freeze” the curve. This will show the performance of the hearing aid to amplify sounds across the frequency spectrum

STEP 10: Advise the patient than you will now turn the probe microphone back on to make some adjustments.

STEP 11: In the AVANT “on-top” mode, make adjustments to the hearing aid fitting software in “live mode” By adjusting the programmable parameters of the hearing device you will be able to: Ensure that soft sounds are Audible, Ensure that conversational speech at ~65dB is Comfortable, Ensure that loud sounds are Tolerable

STEP 12: In some cases, specifically, first time wearers, you may decide to set a lower gain level than is the obvious ultimate goal, to allow the patient to accommodate to amplification in their early experiences.

The patient will know what the ultimate goal is, since they were involved in observing what the ultimate target is that is required for maximum benefit

You have now experienced the power and integrity of speech mapping and can ensure that you have achieved maximum benefit from the hearing device you have fit!

Rainbow Passage

When the sunlight strikes raindrops in the air, they act like a prism and form a rainbow. The rainbow is a division of white light into many beautiful colors. These take the shape of a long round arch, with its path high above and its two ends apparently beyond the horizon. There is, according to legend, a boiling pot of gold at one end. People look, but no one ever finds it. When a man looks for something beyond his reach, his friends say he is looking for the pot of gold at the end of the rainbow.