

## Question

## Answer

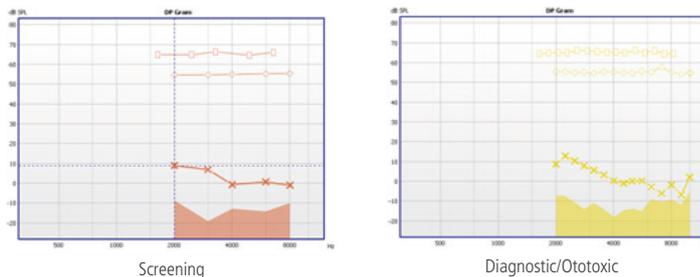
<b>1. What modules are available in Madsen Capella<sup>2</sup>?</b>	The Madsen Capella <sup>2</sup> currently offers DP (DP-Gram and DP I/O) and TE (TEOAE) and SOAE.
<b>2. Is Madsen Capella<sup>2</sup> portable?</b>	The unit not only has a small footprint its sole source of power is a single USB port.
<b>3. Can I plug the unit into a USB hub if I don't have an open USB port on my computer?</b>	Yes, if it is a powered USB hub. It needs to be powered because the Madsen Capella <sup>2</sup> draws the full 500 mA supply current from the USB. A non-powered hub is only guaranteed to be able to deliver 100 mA.
<b>4. What comes with the device?</b>	The device will arrive with the Etymotic Research ER-10D probe, an ear tip starter kit, USB cable, wall mount for the probe and a flash drive with manuals and Otosuite software.
<b>5. What software does the Madsen Capella<sup>2</sup> use?</b>	It is another module in the Otosuite Universe. This NOAH compatible platform is a module based software that allows for different hardware devices to be accessed with a single click.
<b>6. What is Optimized In Situ calibration?</b>	This unique feature is a hybrid of speed and accuracy when it comes in ear stimulus calibration. For DPOAE, Madsen Capella <sup>2</sup> uses the actual tone pairs just before each test frequency to calibrate at the time of the data collection. Instead of calibrating with a broadband stimulus by sweeping through all tone pairs to set the level prior to the start of the test, Optimized In Situ can provide additional security and confidence for more complex cases when accuracy is crucial.
<b>7. Didn't the old Madsen Capella have In Situ calibration?</b>	Yes, however, it lacked the optimization found in Madsen Capella <sup>2</sup> . It offered a sweep of the tone pairs done at the test frequencies prior the start of the test which increased the test time and allowed for a margin of error if the probe moved.
<b>8. What is the purpose of the Historical Probe Fit feature?</b>	The inclusion of probe fit data documents similar test conditions when comparing test results over time. Being able to compare the probe fit from one session to the next provides confidence that any changes observed are not due to poor probe fit. This is particularly useful in ototoxic monitoring.
<b>9. Is the Chirp calibration accurate?</b>	Yes. However, when minor changes in the fine structure need to be assessed or monitored, consider using the Optimized In Situ option for more precise measures.

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**10. What does PPO or Points Per Octave mean?**

Think of this as the frequency resolution – the more points measured the more detailed evaluation you will have. However, the more points measured the longer the test time. A balance must be achieved based on the purpose of the test. For screening tests less points per octave is typical. For monitoring or diagnostics protocols, more points per octave are expected.



**11. What is the PrecisePoints™ feature?**

This feature allows the operator to quickly select the commonly used audiometric test frequencies as the F2 test frequency, to set a range with predefined points per octave, or for advanced users there is the possibility to manually configure any frequency combination desired; providing a virtually infinite number of points per octave.

**12. I am not familiar with internal noise measure or using the standard deviations of the noise floor. What's the purpose of those overlays?**

The noise floor standard deviations will show the variations of the noise during the test. Large variations could indicate that the conditions during the test were not optimal. The internal noise measure is taken at the beginning of the test with no stimulation. The combination of these two overlays may serve as a quality indicator and aid in monitoring potential probe fit problems.

**13. When would I do DP I/O?**

Some studies have shown a correlation to hearing thresholds. However, it should be noted that an actual prediction of a threshold from a DP measurement has not been proven. It has been shown that "healthy ears" typically show a shallow linear growth of the DP amplitude level with presentation levels. In ears where there is an elevated threshold, the growth will likely show a steeper rise.

**14. How do I compare results from one session to the next?**



Clicking the Historical Data icon will bring up a window with previously collected data. Check one or more of the boxes and you will see the results and probe fit information overlapped as well as the data table for numeric comparisons. Highlighting a box will show the numeric information in the data table. The other curves will be represented by a thin line with no symbols.

**15. How can I use Madsen Capella<sup>2</sup> for ototoxic monitoring?**

Since ototoxic monitoring looks for slight changes in DP amplitudes it is important to have a system and protocol that tests many points per octave, uses an accurate calibration measure and allows for historical viewing of data. One recommendation is to use the already programmed measurement setting called "Ototoxic Measure". It uses Optimized In Situ calibration so the primary tones are calibrated just prior to delivery of the test frequencies. It tests many PPO to look at numerous frequencies providing a detailed view of cochlear integrity. On a follow up visit retest using this protocol and use the Historical Data icon to bring up the previous collected data to compare DP amplitudes. Being able to compare the probe fit from one session to the next provides confidence that any changes observed are not due to poor probe fit.

**16. What size tips are available?**

A wide variety of tips are available. These single use tips include a 3-6 mm graduated/tree tip and individually sized tips from 4 mm through 10 mm. There is also a 14 mm foam tip.

**17. How often should I have the system calibrated?**

It is recommended, like other audiometric testing equipment, the system be calibrated by a factory authorized representative annually.

**18. Is there a test cavity?**

Yes! There is a test cavity conveniently housed in the front of the device.

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<p><b>19. What is the difference between calibration and probe fit?</b></p>	<p>At the beginning and end of each measurement, the Madsen Capella<sup>2</sup> software checks the fit of the ear tip and probe assembly in the ear. A 500 Hz tone is presented and the ear canal volume is checked. Based on this the software determines whether the probe is out of the ear, occluded, or OK. This is probe fit.</p> <p>Once a good probe fit is achieved and depending on which Stimulus Correction Method has been selected (Chirp, Optimized In Situ), the presentation stimulus is adjusted accordingly to achieve target signal levels. This is calibration.</p>
<p><b>20. Why does the normative area sometimes disappear?</b></p>	<p>The normative data will only be shown when the selected curves measurement levels match those of the normative data set loaded. If the normative set used 65/55 and the currently selected curve was measured at 70/70, the shaded area will disappear. Selecting only curves measured at 65/55 will allow the shaded normative area to reappear.</p>
<p><b>21. What do the Probe Fit Frequency and Probe Fit Time boxes tell me?</b></p>	<p>The probe fit boxes give information about the stimulus (and levels) measured in the ear during the probe check (500 Hz tone burst followed by a chirp stimulus for DP) and throughout the measurement (500 Hz tone burst followed by a click stimulus for TE). One can observe these boxes as a visual means to assess the quality of probe fit. Excessive ringing or highly fluctuating curves may be indicators of a poor probe fit. The system makes no judgment about the quality of fit based on these data. We merely make the data available to the clinician as an additional piece of information when analyzing results. These curves might be particularly useful for serial testing. If the curves in these two boxes overlay nicely from one session to the next, the clinician can safely assume that any changes in response are not likely to be related to the probe fit.</p>
<p><b>22. What does the correlation number mean in the Probe Fit box?</b></p>	<p>Correlation values are assigned based on the beginning and end probe checks for DP and for the beginning and ongoing response for TE. The higher the value, the clinician can be confident that the probe remained stable throughout test.</p>
<p><b>23. Is it possible to re-measure a single point following a test?</b></p>	<p>Yes. At the end of the test, right click the data point you wish to retest. Select the Re-measure Point option. A probe fit and calibration will be performed and the selected point will be retested.</p>
<p><b>24. Is it possible to move data from one ear to the other, for example, if I selected the left ear but measured the right ear?</b></p>	<p>Yes. If you forgot to change the test ear in the software or placed the probe in the wrong ear, at the end of the test, select the Legend Tab. Right click the test you wish to change and select "Swap data between left and right ear". All data will be moved.</p>
<p><b>25. Is it possible to override a Probe Fit Warning?</b></p>	<p>Yes. When you place the probe and start a test, you may receive an error box indicating a poor probe fit. You should try to reposition the probe and obtain a better fit/seal. If the probe fit warning is due to a large volume (i.e., patent PE tubes), you can select Restart and the test will continue.</p>

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