

## AUDERA PRO

# OCULAR VEMP (oVEMP) QUICK GUIDE

The operating manual contains information pertinent to the use of the GSI Audera Pro, including safety information, as well as maintenance and cleaning recommendations. Read the manual in its entirety prior to use of the Audera Pro on a patient.

## TESTING ENVIRONMENT

It is important that the test environment be conducive to collecting good quality test data and free from excessive noise. The GSI Audera Pro should be used in an acoustically quiet testing environment. To minimize the amount of electrical noise, it is recommended that the Audera Pro be plugged directly into a dedicated, earth-grounded electrical outlet. Any unnecessary equipment such as computer monitors, cellphones, fluorescent lights, electronic beds, etc. should be turned off during testing.

## PREPARE THE SOFTWARE

1. From the opening window, click on the search patient icon to select an existing patient, or click on the new patient icon to create a new patient file and enter First Name and Last Name (required). Click OK.
2. Select the EP icon to launch the evoked potential module.
3. Select Load Settings to select an oVEMP protocol.

SEARCH  
PATIENT



NEW  
PATIENT



EP  
ICON



LOAD SETTINGS



## PREPARE THE PATIENT

1. Prepare the skin at four locations: just beneath the right and left eyes, high forehead, and low forehead.
2. Using the 4-snap lead patient cable, apply the snap electrodes on the patient's head as shown in Figure A. The electrodes should be placed between the center of the eye and the lateral canthus and as close to the eye (up to the lower lashes) as possible. oVEMPs are recorded contralateral to the ear being stimulated therefore the left (blue) lead should be placed under the right eye and the right (red) lead placed under the left eye.

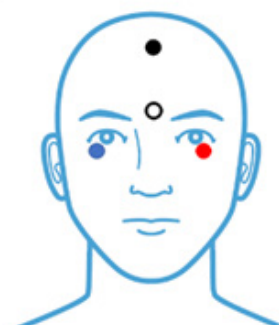
**NOTE:** The above montage results in an upward deflection for N1 and a downward deflection for P1.

3. Check the electrode impedance by selecting the impedance icon from the side toolbar. Under 5K ohms is ideal. If necessary, re-prep if impedance is higher than 5k ohms.

IMPEDANCE  
ICON



FIGURE A



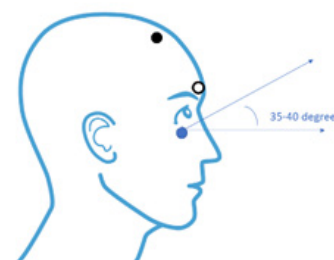
# PATIENT POSITION AND TEST INSTRUCTIONS

1. Place the patient in an upright, sitting position.
2. Instruct the patient to look upward about 35-40 degrees when the stimulus is present. It may be helpful to place a mark on the exam room wall for the patient to gaze at or simply ask them to look toward the ceiling. See Figure B.

**NOTE:** If excessive artifact is present, ask the patient to relax their forehead while gazing upward.

3. The patient should be informed that the stimulus will be loud but only present a short time.

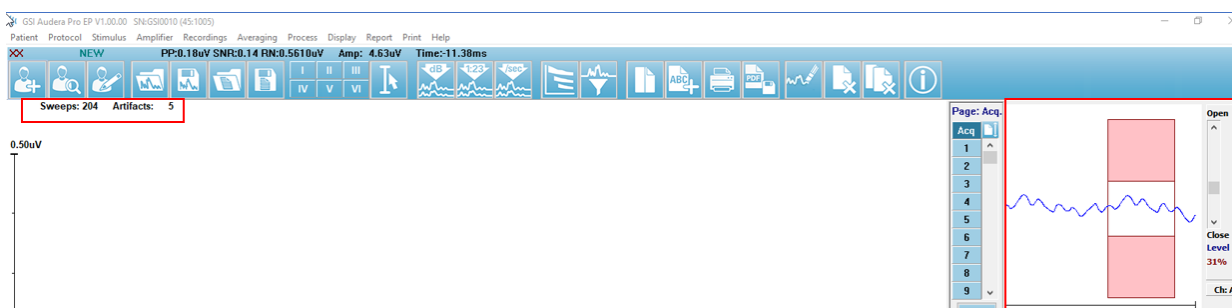
FIGURE B



# PERFORM THE oVEMP COLLECTION

1. Review/change the collection parameters in the Collection toolbar.
2. Begin the collection by selecting the Acquire button from the Collection toolbar. At the same time, instruct the patient to gaze upward.
3. During collection, monitor the incoming EEG ensuring it falls within the acceptable range (white) and review the running sweep accepted and rejected counts in the upper left side of the collection screen.

## COLLECTION SCREEN



4. Replicate the response and repeat test in the other ear.

# VEMP ANALYSIS MODULE

1. Launch the VEMP Analysis Module by selecting the VEMP icon in the opening window.
2. Select one wave per ear to be analyzed from the Open Records window.

**NOTE:** If 2 or more waveforms are selected a grand average will be displayed for analysis.

3. Mark N1 and P1 by dragging the markers to the desired location on the waveform. See Figure C. The Asymmetry Ratio will be automatically calculated.

Approximate latencies are: N1 Latency 10 - 12 ms  
P1 Latency 15 - 17 ms

4. Select the Save Record icon to save a VEMP report in the EP module.

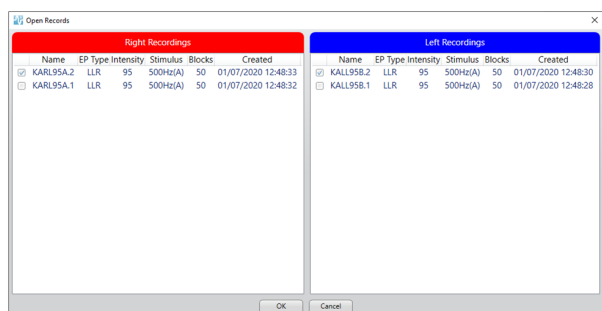
VEMP  
ICON



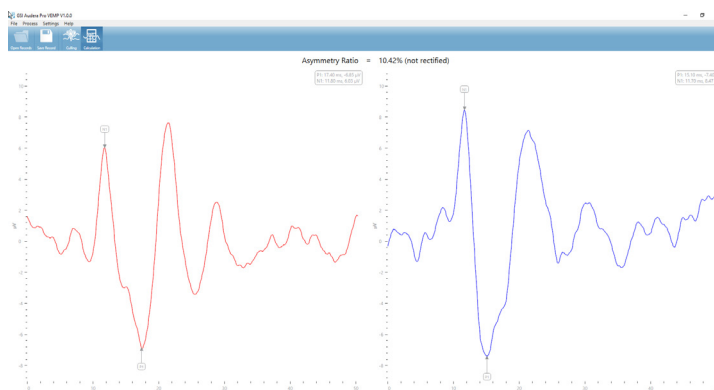
SAVE  
RECORD



## OPEN RECORDS



## FIGURE C



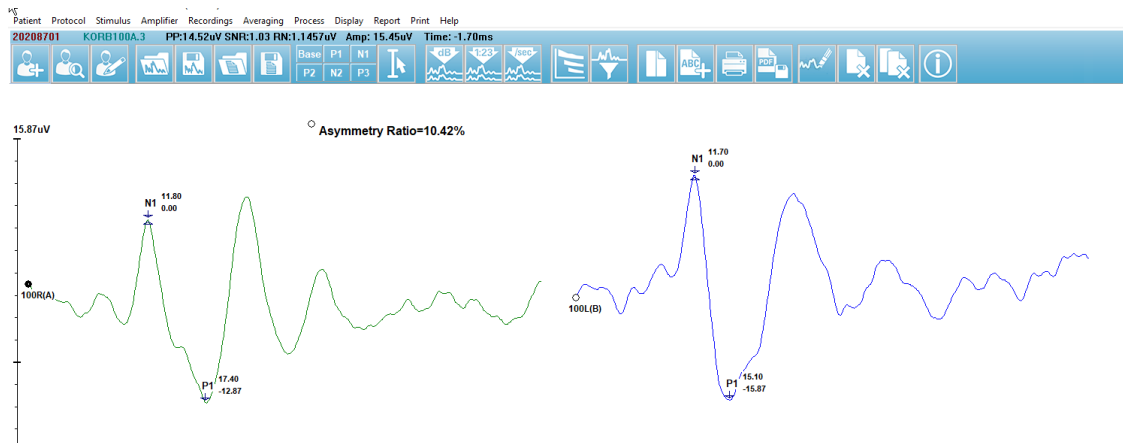
# REVIEW AND PRINT THE REPORT

## LOAD REPORT



1. Return to the EP Module.
2. Select the Load Report icon or select Report > Load Report.
3. Select and open the oVEMP report just created.
4. The marked waveforms and the Asymmetry Ratio (from the VEMP Analysis Module) will load on the page as shown in Figure D.

FIGURE D



5. Arrange the waveforms as needed.
6. To edit the Asymmetry Ratio text, right click on the text handle (small circle to the left AR) and select Edit.
7. To add test summary, Go to Report > Add Text. Move the text anywhere on the page.
8. To save edits select Report > Save Report.
9. Select Print > Print All Pages PDF Preview to view the report and select the printer icon to print the report.