

MADSEN Octavus

Octavus

Quick Guide

Doc no. 7-26-6691/02

Part no. 7-26-66901

CE
0459



otometrics

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Printed in Denmark by GN Otometrics A/S, Denmark

All information, illustrations, and specifications in this manual are based on the latest product information available at the time of publication. GN Otometrics A/S reserves the right to make changes at any time without notice.

Version release date

8. September 2011

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Quick Guide

This Quick Guide assumes that you are familiar with the operation of Microsoft Windows™ and you have installed the software and the sound transducer (on the supplied diskette), have prepared the patient, attached the electrodes and placed the transducer (headphones) on the patient's head. Start the Octavus software via the shortcut on the desktop of your Windows PC:



Whenever you require help, press the F1 key and/or the Help symbol.

I. Overview

The most important functions of Octavus are accessible from: **A** via the **Main Menu**, and/or **B** via the **Function Bar** (left of screen).

A. The Main Menu



The Main Menu is automatically loaded (it can be opened via the button at the top right). From the Main Menu you can execute all of the major functions of Octavus BERA. You can set the functions of the buttons in accordance with your needs (ref. Online Help).



Press the **Patient** button to enter patient's data.



The **Measure** button starts the measurement for the present patient.



To evaluate and print, press the **Print** button

The assignment of these 3 buttons can be altered via the Shortcut buttons menu in the Extras menu. For example, the most frequently used automatic measuring program can be assigned to the **Measure** button.

B. The Function Bar



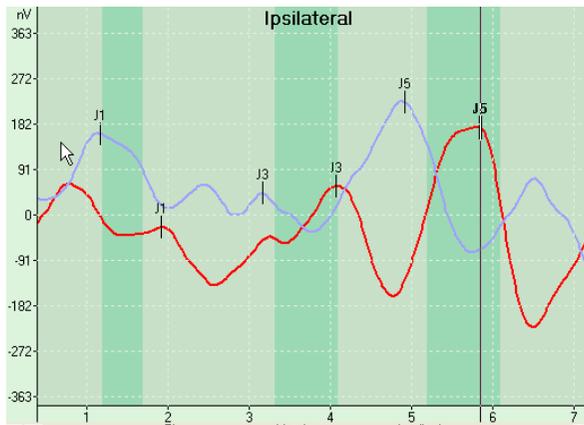
The Function Bar lets you access all Patient data management functions (creating new patients, or selecting and deleting patients), as well as the measuring and/or evaluation programs (**Single curve** and/or **Curve overview**).

The **Today's patients** list gives an overview of all patients you have called in on the same day.





Under **Today's patients** there is also a list of Sessions. Here you can load sessions and also select single curves for overlay (using your mouse).



II. Carrying out a measurement

1. Enter the patient's data via



and click



2. Press the **Measure** button.



At the top left of the screen the movable measuring window appears (either "Manual Measurement" or "Auto-Sequence" as pre-selected). The following explanations refer to the manual measurement, access the Online Help for further information on the Auto-Sequences.

3. Enter your name under the field "Examiner".
4. Set the desired stimulus level by clicking on the appropriate red button (for the right ear) and/or a blue one (for the left ear). Which button is clicked on first determines:
- ear/side (here: right)
 - stimulus level (here: 70dB HL)
 - masking level contralateral (here: 50 dB HL left, ipsi value – 20 dB is default)

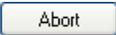
Click 

The program will then perform the electrode test automatically.

5. Impedances are indicated as green (= good), yellow (= acceptable) and/or red (= bad) arrows at the appropriate electrode positions on the head symbol. If the electrode impedance is inadequate, you are asked how to proceed.
6. Select



- if you want to measure despite unfavourable electrode resistance,



- if you do not want to measure,

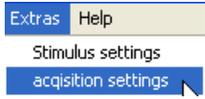
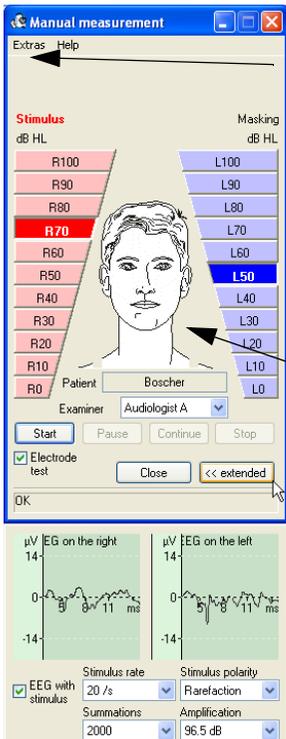


- in order to repeat the electrode test..

During the measurement the biological signals are indicated on the right in the single curve view. After the conclusion of the measurement (normally after 2000 sweeps), proceed with the next measurement (Step 5).

7. Press to terminate the measuring program - you can start a new session again via the  button in the button bar.

About further options and displays



Under **Extras** you can alter **Acquisition settings** and **Stimulus settings**.



The acquisition conditions for both channels are indicated in the two columns to the left and right of the head on the left of the screen (red = bad, green = good).

With you open the lower window, where you can observe the

EEG, online for right and left, with and without stimulus (**EEG with stimulus**), the stimulus rate, stimulus polarity. You can also set the **Amplification**.

The values stated here are preset. If too many artefacts appear during measurement and the measuring conditions cannot be further improved, reduce the amplification in the **Amplification** list field (at the lower right).

III. Evaluation

During measurement, the emerging waveforms are shown in a separate window which is opened via the program function **Single curve**.



With the symbols at the upper end of the y-axis (time) you can expand the curves in a vertical and a horizontal direction () or compress them (). With the arrow keys at the axis origin you can move the time zero point of the record (to display the pre-stimulus phase click). With the linear regulator you can move the marker which runs through the curve as a vertical line. The allocation of the latencies is carried out with the help of the control elements below the curve illustration. You can switch between and on the button bar to the left.

| | J1 | J2 | J3 | J4 | J5 | A5 | IP 1-5 | IP 1-3 | IP 3-5 | Corr. | Corr. J5 | R/L |
|--------|------|----|------|----|------|----|--------|--------|--------|-------|----------|-----|
| ipsi | 2.13 | | 3.78 | | 5.88 | | 3.75 | 1.65 | 2.10 | 3.45 | 9.3 % | |
| contra | | | 3.85 | | 5.90 | | | | 2.05 | 49.97 | 37.3 % | |
| | ms | ms | ms | ms | ms | nV | ms | ms | ms | % | % | ms |

Allocating latencies

1. Use your mouse to move the pointer to the required point and then allocate the latency by pressing one of the keys designated J1 to J5, e.g. . The curve in the diagram above it will then be appropriately marked.
2. If you wish to change or delete a marking, click again on the key you last allocated (e.g. J5). The latency in the field below it is deleted. Clicking on the latency allocation key once more re-enters the latency currently designated with the cursor. The interpeak latencies are automatically determined by the program and entered.

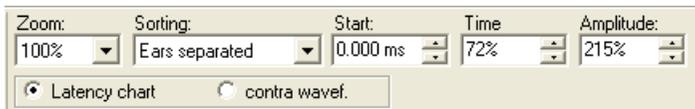
3. If you want to see an overview of the previously measured curves, click the button in the menu bar. The curve currently evaluated in the single curve view is also included in the overview.  **Curve overview**
4. For the further determination of latencies, e.g. if you want to allocate thresholds in the curve overview, click on the curve or the curve symbol,  e.g. (70 dB HL, right ear), so that it is marked.
5. Click with the right mouse key on the point in the curve where a latency is to be allocated and select from the context menu the appropriate marking from **Insert latency / I, II, III, IV, V**
6. After completing evaluation you will find all measurement results entered in the **Latency Intensity Function** as well as in the **Numerical evaluation** on the right of the display screen.
7. Overlaying curves: in order to load curves into the single curve view, first double-click the curve or the curve symbol of the curve in question (e.g. ).

Secondly, to select the curve you wish to overlay, click with the right mouse key on the entry resembling the curve, e.g. Right 80/ 60 dB HL in the session bar and select **Display overlaid**. Then click on the button **Overlay curves** in the toolbar.



IV. Sorting and arranging the measurements for print

In the curve overview, you can see all the curves you have measured in the session so far. You can choose between display options via the control elements in the menu bar:



Display options

On the right screen panel, you can change the display as follows:

- Select **Latency chart** to display ipsi waveforms on the left and latency-intensity chart diagram on the right.
- Select **Contra waveforms** to display ipsi waveforms on the left and contra waveforms on the right.

From the button bar, you can make the curves larger or smaller (**Zoom**), arrange them (**Sorting**), shift the start time (**Begin**), and stretch/compress the time axis (**Time**).

You can move the single curves on the curve symbols (e.g. **R70**) in a vertical direction at any time. Delete marked curves from the view by pressing the Del. key or by clicking the curve with the right mouse key and selecting **Remove waveform**.

If you want to restore automatic sorting, select **Sorting** in the control element, and then **Ears separated**.

For a side comparison, select **Ears overlaid**  Waveforms corresponding to the same stimulus level of the left and right ear, are superimposed. The **Latency intensity function** is displayed at the top right. The characteristic curve for the right ear is shown in red, the one for the left ear in blue. By clicking the **Latency intensity function** with the right mouse key, the characteristic lines for the left and/or for the right ear can be faded out. Below the Level latency diagram, the latency values are listed in the table Numerical evaluation with latencies, interpeak latencies and the mean values of the interpeak latencies (MV). Latencies and interpeak latencies significantly deviating from the standard values are marked in colour.

V. Print

When all of the curves have been sorted, print via the  button or via **File/print**. The printout is identical to the screen display. As an option, all measurement parameters can be printed out on a 2nd page (adjustable via the menu **Configuration/Configure print-out**).

VI. Online help

Online help can be accessed by pressing **F1** or the  button. Here you will find much more information about the operation of the software, the Octavus module as well as about the measuring method.

