

QUICK START GUIDE

eABR with Sentiero Advanced

1 CABLE CONNECTION

The connection schema is illustrated in the following image: The implant is controlled by the manufacturer's interface and software. The recording is preferably done at the contralateral side to reduce electrical artifacts by the implant. The CI interface's trigger out is connected by means of the trigger cable with the Sentiero Advanced's red ODU socket.

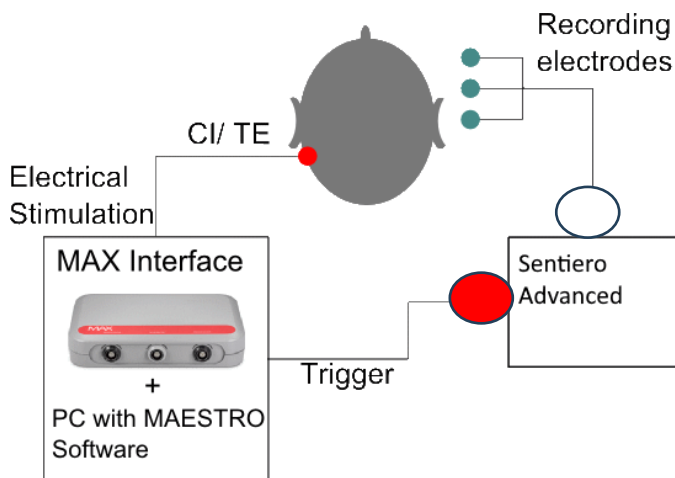
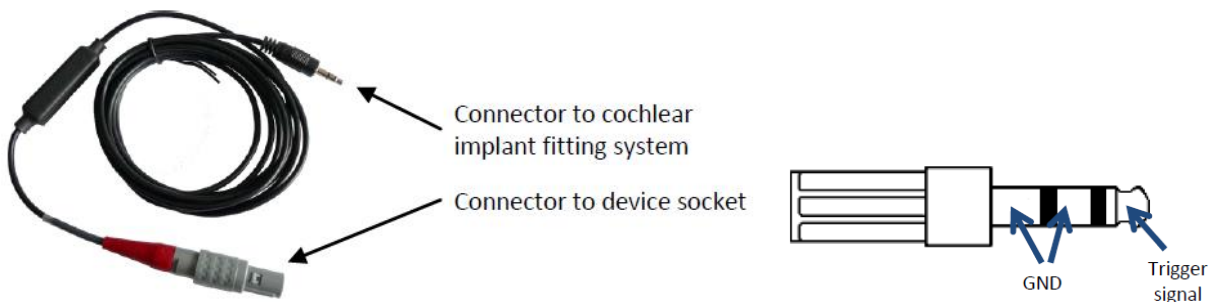


Image source: <https://blog.medel.pro/surgical/eabr-intracochlear-test-electrode/> has been adapted



2 SYSTEM AND HARDWARE SETUP CHECK

Before the 1st recording it is recommended to do a more extensive check of proper hardware functioning and compatibility.

For the initial hardware compatibility check an implant simulator may be used. Set the CI software to enable the trigger output at a certain frequency (e.g. 35.2 Hz). Connect the trigger cable. Connect the electrode cable and short circuit the leads using the test rod or connect to electrodes placed at the skin.

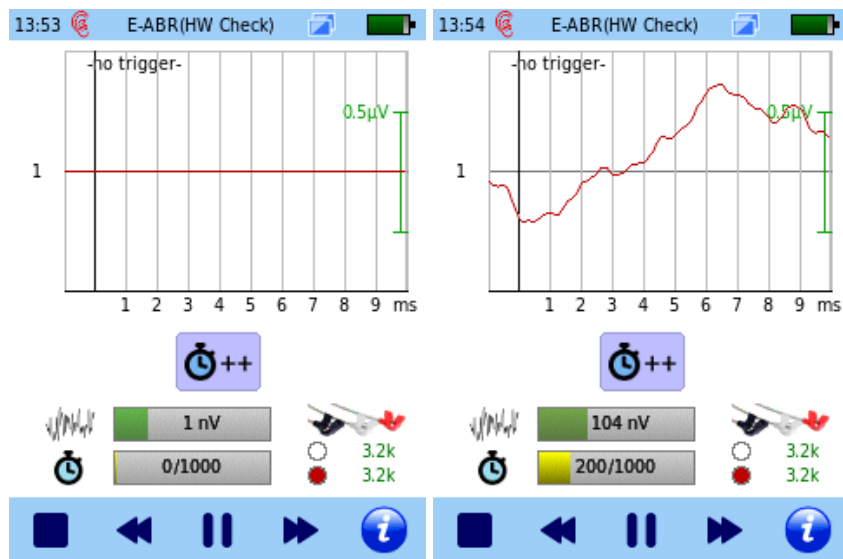
QUICK START GUIDE

eABR with Sentiero Advanced

Open the EEG spectrum viewer on the Sentiero Advanced. Confirm that in the bottom left corner the same frequency "Trig: xy,z Hz" is shown as set in the software.



Open the "E-ABR" module from the test menu and select the "HW Check" preset. Assure that the settings are as shown in the screenshot above. Stop the Trigger output in the CI software and select to output 200 clicks. Start the test on the device and press the play button to wait for trigger pulses. After the CI software has finished the output make sure the device shows the same number in the yellow progress bar (see below).



QUICK START GUIDE

eABR with Sentiero Advanced

3 RUN THE TEST

Before running an eABR it is recommended to check the EEG spectrum for sources of disturbance or interferences with the patient connected. In case there are interferences it is advised to identify the source and if possible, disable it during the measurement.

Please note: The 50/60 Hz Mains filter is disabled during eABR.

There are 2 modes to control the measurement: (a) Set the desired number of averages in the device and keep the CI software producing output until the number has been reached. The device will wait for the play button to be pressed to continue with the next trace. (b) Use the CI software to control the measurement by setting the number of averages to a big number in the device and enable the "Use change in trigger as Skip" option in the Sentiero's settings.

During the measurement the trigger signal frequency is shown in the upper left corner (e.g. 41Hz in the screenshot below). When there is no trigger signal the averaging is paused. Long press to the trace opens the trace label menu to enter additional information for a trace, e.g. electrode number and stimulation intensity.



QUICK START GUIDE

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The screenshot displays the eABR software interface. At the top, the status bar shows the time 14:04, signal strength, and battery level, with the text "E-ABR(HW Check)".

On the left is a virtual keyboard with a text input field containing "E7 25QU".

In the center-right is a waveform graph titled "no trigger-". The y-axis is labeled "1" and the x-axis is labeled "ms" with values from 1 to 9. A red waveform is plotted, and a green vertical scale bar indicates a magnitude of $0.5\mu\text{V}$. The text "E7 25QU" is also present near the start of the waveform.

Below the graph is a control panel with a timer icon labeled "++", a red bar showing "43 nV", a yellow bar showing "807/1000", and two 3.2k indicators (one white, one red).

At the bottom are two rows of navigation buttons: a green arrow, "OK", "123", "?Ba", and an info icon; and a square, left arrow, pause, right arrow, and info icon.

QUICK START GUIDE

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Quick Guide Information

Release date: 07/2024
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Valid from: Firmware Rev. 2.9, Mira PC Software Rev. 2.5
Applies to: Model: SOH100360

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