

User Guide

Temperature

This user guide has been created to educate and inform the reader about doing temperature measurements

For more information about NeXus, our BioTrace+ software, please visit our website or contact us.

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Introduction

This manual provides a step-by-step review of how to do Temperature measurements with the NeXus-4, NeXus-10 or NeXus-32. The manual provides information about the required hardware, preparation and measurement steps, artefacts (appendix 1), and care of materials (appendix 2).

Required Equipment

The following is required to perform temperature measurements:

- Nexus-4, NeXus-10 or NeXus-32
- Temperature Sensor
- Tape*

**To prevent heat from building up, a porous tape that allows some ventilation is recommended.*

Temperature measurement setup

Before the actual measurement can start, the equipment has to be connected. Detailed information on setting up the NeXus can be found in the NeXus User Manual or Quick Start.

Connect the Temperature Sensor to input D of the NeXus-4, input F of the NeXus-10 or input 32 of the NeXus-32. Make sure the red dot of the connector is facing downward with the NeXus-4 or NeXus-10 or upward with the NeXus-32.



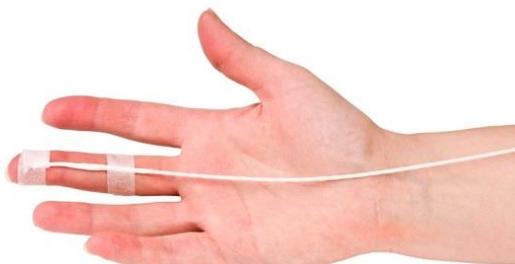
Sensors can be disconnected by pulling the silver ribbed part of the connector backward.



To measure peripheral skin temperature, the sensor is usually attached to a finger of the non-dominant hand. Place the sensor tip on to the palmar side of the fingertip to the finger of choice and make sure the tip touches the skin. In case hands will be resting on ones lap, make sure to place the sensor on the side of the fingertip or put a towel between hands and legs. This will prevent heat from the legs influencing the measurement.

Use the porous tape to cover the tip and attach the thermistor to the finger. Make sure the tape is not too tight as this can obstruct blood flow.

Attach the sensor cable to the finger with some tape as well to avoid movement artifacts.

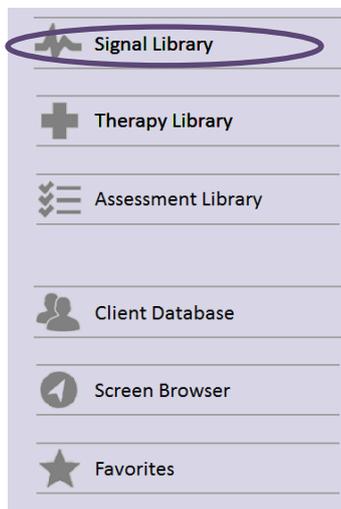


BioTrace+

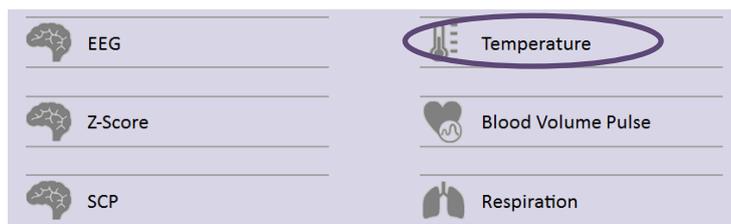
Start the BioTrace+ Software.



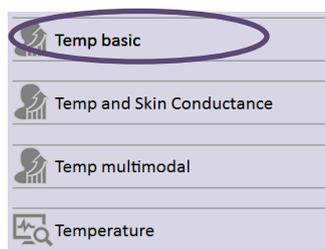
Select **Signal Library**.



Select **Temperature**.



Select your preferred measurement screen (e.g. temperature basic).

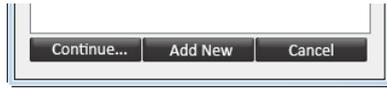


Switch the NeXus on.

Click the **recording** button.

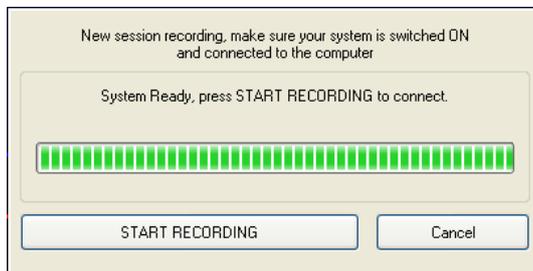


The *select a client* dialog box will appear.

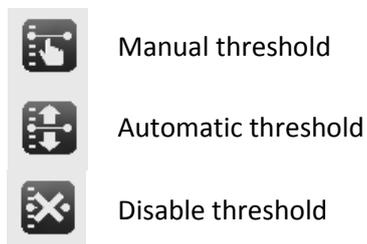


Select a client and click **Continue...** or click **Add New** for adding a new client.

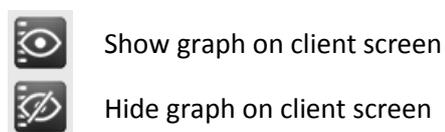
The *New session recording* screen will appear. Click **Start Recording** to start recording a session.



Set threshold setting controls of a bar graph.



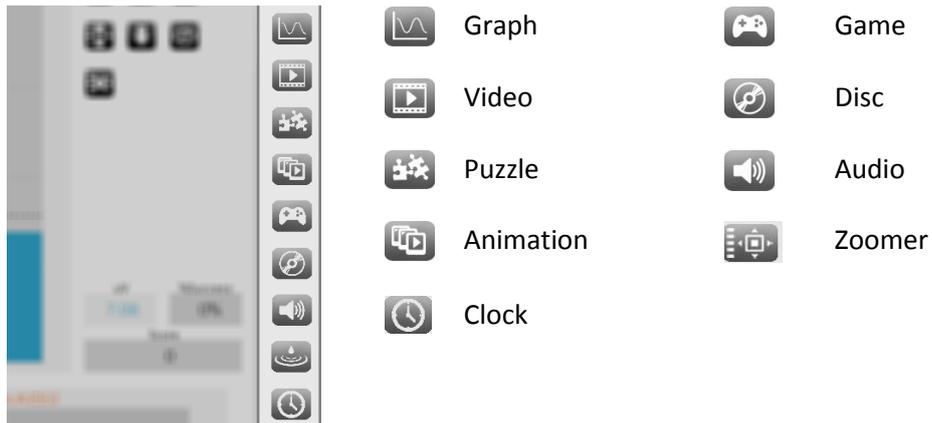
It is possible to show and hide the bar graph feedback on the client screen



Feedback Type Controls are shown on the right side of a training screen.

Press the Windows logo key  +P for extending display to dual monitor setup

Select one of the feedback options that are available on the right side.



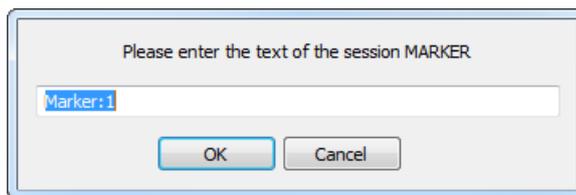
Select other content during a recording by clicking the change feedback icon in the right top corner. This can only be used with videos, animations, games, puzzles, and audio.



Markers can define a certain event during a recording. These markers can be added manually by pressing *the marker symbol* in *Session controls in the left bottom corner* (or by pressing **Enter**):



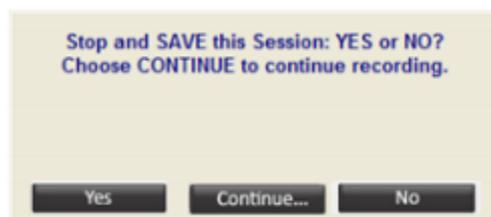
The following dialog box appears for naming markers.



In order to stop the recording, click the **stop** button.



An alert box will appear.



Click **Yes** and save the session and enter a description of the session.

Enter your description line for this session

Confirm by clicking **OK**, the session is now saved.

Appendix 1: Artifacts

- **(Environmental) temperature artifacts**
Be aware that contact of the temperature tip with objects or body parts other than fingers may lead to temperature changes, other than the temperature change caused by blood vessel dilation/constriction of the finger. Make sure to place the sensor on the side of the fingertip or put a towel beneath the hands to prevent heat or cold influencing the measurement. Also take into account that air flow along the sensor can influence the measurement.

Appendix 2: Care of materials

NeXus temperature sensor cleaning

The NeXus temperature sensor can only be cleaned. There are no procedures or prescriptions for disinfecting.

The sensor cable and tip can be cleaned with lukewarm water or alcohol prep pads (do not submerge in water or in alcohol solution).

Please avoid cleaning the connector, as this may affect its performance.