MINDMEDIA
NEURO AND BIOFEEDBACK SYSTEMS

Quick Start
NeXus-10 MKII

Version 2.0

Contents

For an elaborated overview, please refer to the hardware and software manual. These can be accessed on our website https://www.mindmedia.com/documentation/

Install BioTrace+ Software

Make sure to check latest system requirements on
https://www.mindmedia.com/en/products/biotrace-software/?tab=specifications

Insert the supplied BioTrace+ DVD or download the latest full version from
https://www.mindmedia.com/downloads/

Run **setup.exe**. The *Welcome* screen will appear. Click **Next** and follow instructions.

Power supply

Insert a fully charged battery pack into the NeXus-10. Hearing a 'click' indicates that the battery pack is placed correctly.
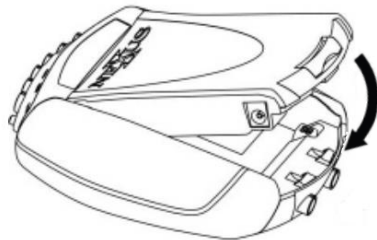
Connect the NeXus

The NeXus-10 can be connected wirelessly by using (1) Bluetooth. The NeXus-10 also allows for (2) USB connection.

Bluetooth pairing

Use the internal Bluetooth of the computer or connect the Bluetooth dongle to the computer and deactivate the internal Bluetooth of the computer.

Switch the NeXus on by pressing and shortly holding the power button.

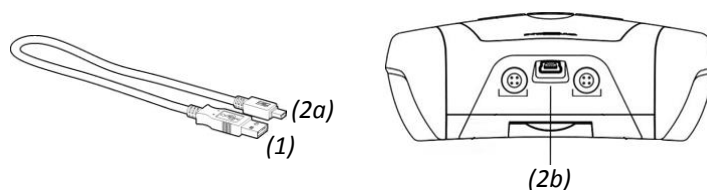Select Start ⊞ > **Settings** > **Devices** > **Bluetooth**

Open **Bluetooth** > select the NeXus device > **Pair**.

Enter the passcode for the device. These are the last 4 digits of the serial number displayed on the screen.
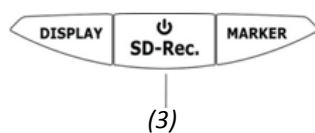
Follow further instructions.

USB connection

Connect the USB cable (1) to a USB input on the computer. Connect the micro USB cable (2a) to the NeXus micro USB input (2b).

Switch the NeXus on by pressing and shortly holding the power button (3).

A notification will appear in the bottom right corner. A notification is shown once driver installation has finished.
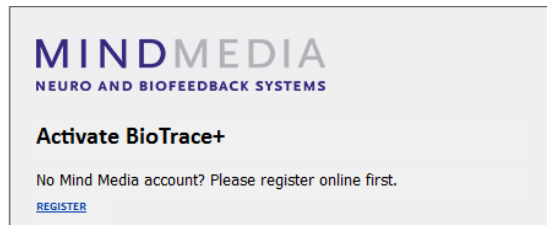
Activate BioTrace+

Open BioTrace+. Make sure your NeXus device is connected to the computer.

The *Introduction* screen will appear. Click **Continue**.

Click **Register** to register a Mind Media account or visit
https://www.mindmedia.com/register/

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Activate BioTrace+

No Mind Media account? Please register online first.
REGISTER

Fill out the account details and click **Send**.
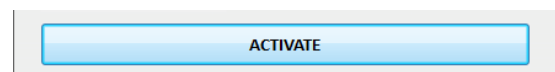
Send

Confirm e-mail address by clicking the link in the confirmation e-mail.

No confirmation e-mail? Make sure to check the Spam folder.

Go back to the *Sign in* screen and enter e-mail and password.

I have a Mind Media account. Activate BioTrace+ with your email and password
Email:
Password:

Click **Activate**. Once BioTrace+ has been successfully activated, a message will appear.
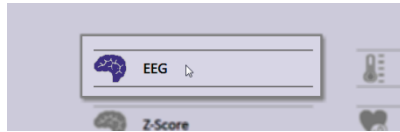
ACTIVATE

No internet connection? An Offline Activation screen will appear. Send the 'Request Key' and the registered email address to support@mindmedia.com to receive an 'Activation Key'.

Start a session

Select a training screen

At the startup of BioTrace+, *Home* will appear.

Select **Signal Library** and choose a signal or modality (e.g. EEG).

Select a screen in the list (e.g. 1x EEG SMR). This will open a training screen.

Connect sensors and check signal quality

Click the **Connecting** button to check how to connect the sensors.

Sensor input will also be shown between brackets in graph titles

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Although there are multiple configurations possible for the NeXus-10, the most common configuration is:

A&B		EEG
C&D		EMG
E		Skin Conductance
F		Temperature
G		Blood Volume Pulse
H		Respiration

Connect the sensors to the correct input and make sure the red dot of the connector is facing downward. Sensors can be disconnected by pulling the silver ribbed part of the connector backward.

Click the **Signal check** button to check signal quality after starting a recording.
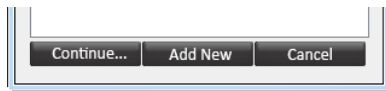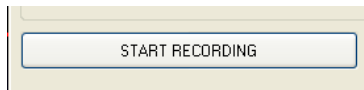

Start a recording

Use the *Session Control Bar* on the bottom of the screen to control a session. Click the **Record** button to start a recording.

Select a client and click **Continue...** or click **Add New** to add a new client.

Click **Start recording** to start recording a session.


In order to stop a recording, click **Stop**.

An alert box will appear. Click **Yes** to save the session and to enter a description of the session. Confirm by clicking **OK**, the session is now saved.

Client feedback

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

Select type of feedback

Feedback Type Controls are shown on the right side of a training screen. Just select one of the buttons that are available on the screen.
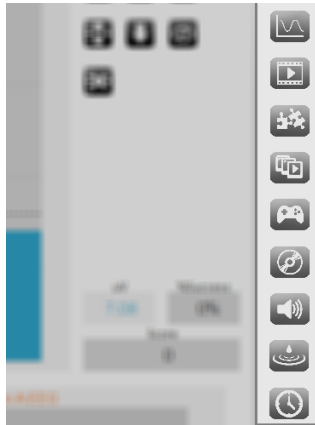
〰	Graph	🔊	Audio
▶	Video	〰	Water ripple
🧩	Puzzle	🕐	Clock
🎞	Animation	📦	Zoomer
🎮	Game	⚛	Mandala
💿	Disc	⏺	Protocol

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.

Set thresholds

The threshold setting controls are displayed on the right side of a bar graph:

👆	Manual threshold
⬍	Automatic threshold
✖	Disable threshold

A dotted line indicates that no feedback options have been set for this object. A solid line indicates feedback options have been activated.

Threshold enabled   *Threshold disabled*

The threshold direction controls are displayed on the right side of a bar graph:

⬆	Train up
⬇	Train down

Review & Analysis

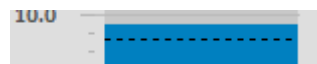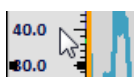Data can be reviewed and edited in *Session Overview* by clicking the following symbol in the Session Control Bar. This will open the **Session Overview**.
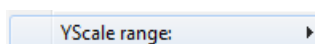

Use the right mouse click for using several options

Change display of signals

Right-click the y-axis for changing the display of signals.

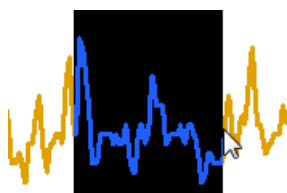Change the Y-scale range by choosing **YScale range.**


Set the range manually or automatically.

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*In order to save these settings, make sure to go to file in the upper left corner and choose **save screen***

Selecting and zooming data

Select data by clicking the left mouse button on the time axis and dragging the mouse to the left or right.

When releasing the mouse button, a drop down menu will appear. Choose **Zoom selected data** to zoom in to the data. Alternatively use the **+** and **-** keys on the numerical keyboard to zoom in.
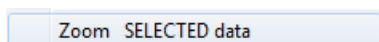
The *Size of TIME axis* can also be changed by clicking the right mouse button in the session overview and choosing the length of the time axis from a drop down menu.
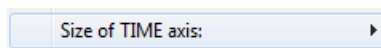
Right click and choose **Time-axis <Fit Session>** under Size of TIME axis to display the full session again. Press backspace to quickly show all data.

Segments

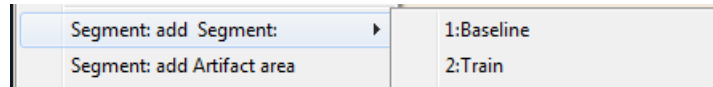There are several predefined segment types available, like baseline, train, stressor, relax etc. Add specific segments in sessions to distinguish different phases in a recording.

After selecting a part of the data, a segment can be defined by using the *Add Segment* option.

| Segment: add Segment: ▸	1:Baseline
Segment: add Artifact area	2:Train

Artifact areas

Artifact areas are special types of segments that mark a part of the session as being 'invalid'. These artifact areas will be excluded for analysis. The data in the artifact area will not be deleted, it is only 'marked' as being artifact.

Manually marking artifact areas

Create an artifact area by selecting data, and choosing **Segment: add Artifact area**.

Segment: add Artifact area
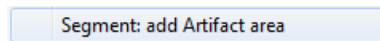
The artifact segment will appear as a red cross hatched area.

40: BVP amplitude (Max. values, 10 Sec.epoch)

00'30''
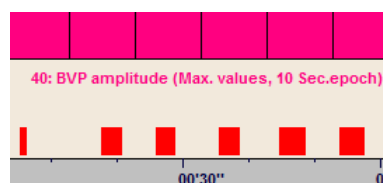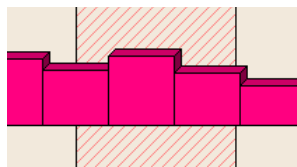
Automatic artifact rejection

Enable automatic artifact rejection by right clicking the screen and open Automatic artifact rejection > **Enable rejection**.

| ✓	Enable rejection
	Disable rejection
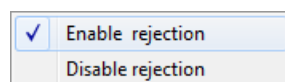
One or two criteria for data rejection can be set. Whenever a signal meets a criterion, red marks will appear just above the time axis.

*The automatic artifact rejection option will be enabled for all future recordings. In order to disable it, choose Automatic artifact rejection > **Disable rejection***

Session statistics

Right click the *Session Overview* screen and choose Compute statistics: > **On entire session** or > **On all segments**.

| on entire session |
| on all segments |
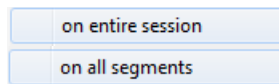
It is also possible to compute statistics over a selected data area. Select an area and click **Segment: compute statistics**.

| Segment: compute Statistics |
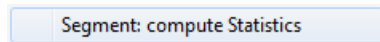
The *Session Statistics* screen will appear.

Session Overview Statistics
over 302 Seconds of raw and computed data, starting at t=1 Sec.

Min.	Max.	Mean	Var.	StdDev	Coeff.V	%>TH1	%<TH2	
14.69	17.57	15.52	0.21	0.46	0.03	100.00	0.00	[Sensor-E:SC/GSR]

0.00% of the data was rejected (artifacts)

This will show basic statistics (min, max, mean, etc.) for each signal that is displayed.

Selected text from this dialog box can be copied and pasted.

Click the **Print! (preview)** button to print or export the report as a PDF file.

| Print! (Preview) |
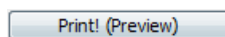
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