



# Manual for Body & Mind-App with Sensors





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### Foreword

HEG stands for Hemo-Encyphalography. This is the basis for training with the Body & Mind Smart Biofeedback app (hereinafter referred to as "Body & Mind app"). With the help of red/infrared light, the red coloration of the hemoglobin, i.e. the red blood pigment, in a certain area of the forehead is determined locally: this in turn offers conclusions about the degree of intensity of the blood flow and thus also the oxygen supply in this area. The change of the blood circulation through targeted concentration or relaxation is always accompanied by a variably changed cell metabolism. The task for the client is to concentrate or relax according to the instructions. If this succeeds, videos are played 'as a reward'. If this is not successful, the video stops until the task is completed again.

### **Required accessories**

- To work with the Body & Mind app, you need a HEG-neuro sensor or a HEG-neuro sensor from MediTECH Electronic GmbH.
   For the operation of this sensor and especially for safety instructions, please observe and follow the instructions for the HEG-neuro sensor.
- 2. In addition, you will need a tablet or smartphone (hereinafter referred to as 'terminal device').
- 3. In order to use the full scope of the Body & Mind app, you can expand the measurement of the parameters with a TPS sensor (version 2 or higher). In addition to the HEG training, this also enables the combined training of temperature control, heart rate variability as well as skin sound ability.
- 4. In addition, a WLAN connection and Bluetooth<sup>®\*</sup> activation are required to connect to the sensors. This is required at the beginning during installation and later for downloading videos.
- 5. The Body & Mind Smart Biofeedback app can be downloaded free of charge from the Google Playstore (for Android devices) or the Apple Store (for iOS devices). Read about this in the chapter Downloading the Body & Mind Smart Biofeedback app.

### Recommendation

Since version 1.6.2, the Body & Mind app can also be used with smartphones. When using smartphones, it is often necessary to scroll in the screen for space reasons. However, for this reason and for better visibility of the videos, we recommend the use of tablet.

<sup>\*</sup> Bluetooth<sup>®</sup> is a registered trademark of Bluetooth SIG, Inc.

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### Download the Body & Mind app

### Notice:

This step must be performed once on your end device (tablet or smartphone).

1. Scan the correct QR code for your end device.



### Notice:

If you have problems with the QR codes, you can also search for the app (HEG) or enter the following links into a browser.

- https://play.google.com/store/apps/ details?id=de.mediTECH.heg\_neurofeedback
- https://apps.apple.com/us/app/ heg-neurofeedback/id1523980177
- 2. Tap Install.

This will install the app on your end device. This action may take a moment. At the end of the installation - usually - the logo of the Body & Mind app will appear on your end device screen.

3. Tap on this logo to start the app. If you have not activated the location detection and Bluetooth<sup>®\*</sup>, you will be asked for it after the start.

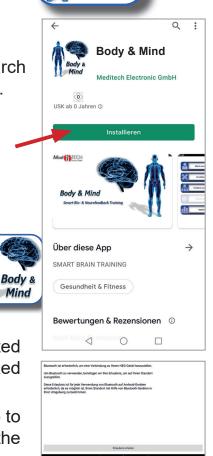
Explanation: These two options are required for the app to establish the connection between the end device and the HEG sensor via a wireless Bluetooth<sup>®\*\*</sup> connection.

4. Activate - when prompted - the two accesses.

After installing a new version of the app (for the first time or for updates), you will be prompted to read the instructions and confirm this with a click.

### Assurance:

No movement profiles are created on the part of *Medi*TECH. Nor is there any other interest in your location information.



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# Establishing a link to the HEG-neuro

- Switch on the HEG-neuro. To do this, press the button on the HEG-neuro. The operating light next to the button should now light up.
- 2. Start the Body & Mind app.

To do this, tap this icon.





After you have started the Body & Mind app, the start screen appears and is visible for a few seconds. During this time, the app will attempt to connect to the HEG sensor. If the Body & Mind app has found an HEG sensor, information on this appears on the screen: "Connected to HEG-x", where x stands for the serial number of your HEG sensor.

The app will preferentially search for the HEG sensor to which the end device was last connected. Of course, you can also work with another sensor.

### Hint:

If the app cannot connect to the HEG sensor, you will be informed of this on the screen:

Then check whether the HEG sensor is switched on and whether Bluetooth<sup>®\*\*\*</sup> is activated on your end device.

Bluetooth<sup>®\*\*\*\*</sup> is activated on your end device. Once you have checked this, tap the Repeat search button in the adjacent dialog to make another connection attempt.

Or close the app and restart it.

Alternatively, you can also work temporarily without the HEG sensor in the Body & Mind app, e.g. to enter users, download feedbacks or analyze results. However, training is not possible without an HEG sensor connected to the end device.

<sup>\*\*\*</sup> Bluetooth<sup>®</sup> is a registered trademark of Bluetooth SIG, Inc.

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### Establish a link to the TPS sensor

If you are working with an Android end device, you can also use ThoughtTechnology's TPS for training.

The TPS must be connected to the end device once.

- 1. Turn on the TPS sensor that you want to train with. To do this, press the start button for about three seconds. This is located on the lower edge of the sensor and is marked with a power symbol. The light on the TPS must now be on.
- 2. If you have not yet used the TPS sensor with the Body & Mind app, you must first link it in the settings of your end device.
- Note: The following description may differ slightly in the procedure on your end device or other terms may be used.
- 3. To do this, open the settings of your end device. This menu is usually displayed with a gear wheel.
- 4. In the settings, select the subitem Device connection or Bluetooth®\*\*\*\*\*.
- 5. The app attempts to establish a connection with the TPS sensor. This may take a small moment.
- 6. Once the app has found the TPS sensor, it is displayed as an available device or paired device. It is hidden behind the name TPSXXXXX, where the Xs stand for the serial number of the TPS, which is indicated on the top of the TPS: e.g. TP003033.
- 7. Tap on the entry. This will connect the sensor to your terminal device. Again, this may take a small moment.
- 8. Switch back to the Body & Mind app.
- Tap on the magnifying glass below the selection fields.
   When the Sensor List window is closed, tap the TPS button in the top right corner of the main menu. This will open the sensor list again.
  - If the TPS sensor was detected by the device, it will be displayed, the name will be colored green, and it will have a green connection icon.
  - If the TPS sensor was not detected by the device, you will be informed of this. You will also receive instructions on how to proceed.

If the connection to the desired sensor(s) has been established, this is indicated in the top line of the app with green icons.

To connect the TPS to the end device, please follow the instructions for the TPS. From then on, it will be automatically detected when you tap the Connect button. It is important that the TPS is switched on.

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# Operating the Body & Mind app

# Operating the Body & Mind app

The central place of the Body & Mind app is the main menu.

From here you can

- Start training sessions Continue from page 17
- View and evaluate results Continue from page 21
- **History view previous results** Continue from page 26

A pop-up menu (top right) hides additional important items that you will rarely use:

- **Screen** Help gives you quick hints about app controls. This option is not explained further in this guide.
- **Help** opens a global help for the app including a link to the manual. This option is not explained further in this manual.
- Sensor list opens the window with which you can manage the sensors with the app.

For more info, see page 8 onwards.

Settings - allows global adjustments of the training as well as assignments of the sensors.

For more information, see page 9.

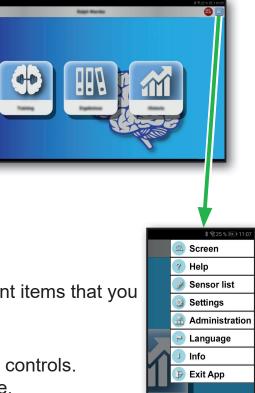
• Administration - here you can find the user administration, password requests and administration, selection and administration of feedback videos.

You will find more information on page 11

- **Language** selection of the menu and menu language. This option is not explained further in this manual.
- Info Information about the manufacturer of the APP and the terms of use.

This option is not explained further in this manual.

• **Exit app** - option to exit the app. This option is not explained further in this manual.



# Select sensors for training (pop-up menu 'Sensor list')

In this step you manage the sensors you use to perform the workout. If you have only one copy of each sensor, the Body & Mind app will use only that one. However, if yours has more than one copy, it is necessary to select the respective sensors.

- 1. In the main menu, tap the button on the top right (). The popup menu will open.
- 2. Tap the Sensor list entry in the popup menu. The Sensor list window opens.

### HEG Sensor

- 1. Switch on the HEG sensor with which you want to train.
- 2. Tap on the magnifying glass under the selection fields.
  - Tap on the magnifying glass under the selection fields.
     If the HEG sensor was recognized by the device, it is display-



ed, the name is colored green and a green connection symbol is displayed.

• If the HEG sensor was not detected by the device, you will be informed about this. You will also receive instructions on how to proceed.

### TPS Sensor

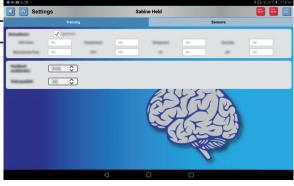
- 1. Switch on the TPS sensor with which you want to train.
- 2. If you have not yet used the TPS sensor with the Body & Mind app, you must first link it in the settings of your end device. To do this, follow the steps in the chapter Establishing a link to the TPS sensor.

Once the connection to the desired sensor(s) has been established, this is indicated in the top line of the app with green icons.

# Customize training settings (pop-up menu 'Settings' - tab 'Trainings').

In this step you will customize the workout displays and parameters for the currently activated user.

- Tap the top right button (I) in the main menu. The popup menu will open.
- Tap the top right button () in the main menu. The popup menu will open. Tap the Settings item in the pop-up menu. The Settings window opens in the Trainings tab.



3. Here you can adjust the following parameters:

Parameter	Meaning			
Threshold value dynamic or real	If the check mark is set, the respective threshold values adapt to the conditions. The app also calculates the set levels (very easy,) to make the training very easy or very challenging for the user. If the check mark is not set, you can change the thresholds as			
Numerical values	you wish. However, make sure that the parameters are chosen sensibly.			
	To do this, tap in the field whose value you want to change. In the keyboard field that opens, enter the desired values.			
	To get the feedback, i.e. to display the video, the values of the training option			
	<ul><li>Relaxation the values must fall below</li><li>Concentration the values must be exceeded</li></ul>			
Hide feedback	<ul> <li>Here you can define if and how feedback should be displayed if the threshold values are not reached.</li> <li>Both = stop both video and sound</li> </ul>			
	• Sound = the sound is faded out, the video can be seen (muted).			
	<ul> <li>Video = the sound is heard, the video is faded out.</li> <li>You make the selection with the arrow keys.</li> </ul>			
Video quality	Here you can define in which picture quality the video should be seen.			
	Note: The higher the value, the clearer the video is to be seen, but the longer it takes to load and play. So choose the settings wisely.			
	Use the arrows to select values between 144 and 720.			

Choose the settings according to your preferences. The operation of the options is self-explanatory or already described above.

Close the window with the button **(**top left)

## Adjust sensor settings (popup menu 'Settings' - tab 'Sensors')

In this step you adjust the sensor setting for the currently activated user.

- 1. In the main menu, tap the button at the top right (I). The popup menu will open.
- Tap the Settings item in the popup menu. The Settings window opens in the Trainings tab.



- 3. Tap on the Sensors tab.
- 4. Here you have the following options:

Options	Meaning	
Search at startup for	Here you can define which sensor types the user should train with or which sensors should be searched for at the start of the training. For example, if you do not have a TPS sensor, the app does not have to search for it. This will save you from error messages. Tap on the field behind the sensor type with which you want to train. (HEG / TPS)	
Show training selec- tion for	Here you can define which training selection should be displayed before starting the training. If there is no TPS sensor, the options do not have to be displayed.	
Show hint informa- tion	Here you can hide the hint information that should not be shown.	
Can delete results	If a check mark is set at this point, the user can delete determined results.	

Choose the settings according to your preferences. The operation of the options is self-explanatory or already described above.

Close the window with the button **(top left)** 

### Manage user data (popup menu 'Administration' - tab 'Users')

In this step you manage user data. These can be trainees or therapists who supervise the trainees. This is also where access permissions are assigned.

- 1. Tap the button in the top right corner of the main menu (I). The popup menu will open.
- 2. Tap the Administration item in the pop-up menu.

The Administration window opens in the Users tab. The currently entered users are listed in the field.

Here, the green tick means that the respective user is an admin. The red cross means that the user is not an admin.



3. Here you have the following options:

Option	Meaning		
	Add a user - a window will open. Enter the user's first name and last name. Here you can also define whether the user should have admin rights or not. As an admin, you can change data of other users, and assign or revoke rights to "non-admin" users.		
	Add a user - a window will open. Enter the user's first name and last name. Here you can also define whether the user should have admin rights or not.		
	If you want to delete the data of the user highlighted in blue in the list IMMEDIATELY. You will be asked for confirmation just in case.		
	If you want to select another user for the next user for the next training or to view his results.		

Select the option that corresponds to your intention. The operation of the options is self-explanatory or already described above.

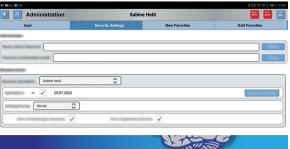
Close the window with the button **(top left)** 

**Note:** To create users, it is not necessary to be online or to have your terminal device linked with sensors.

# Edit security settings (popup menu 'Administration' - tab 'Security settings').

In this step you set the admin password and manage permissions for individual users.

- 1. In the main menu, tap the button at the top right (). The popup menu will open.
- Tap the Administration item in the popup menu. The Administration window opens in the Users tab.



- 3. Tap on the Security settings tab.
- 4. Here you have the following options:

Options	Meaning • • •	
New admin pass- word	Here you set a first-time or a new admin password. With the password you avoid that users without admin rights can use the Administration menu.	
	Note: Use this function with caution. A changed and then forgotten password creates effort for you. Also, you change the admin password for all admins and then have to share it for all admins to continue wor- king.	
Reset password email	Enter here a mail address to which a mail should be sent to reset the password in case of a forgotten password. If no mail is entered here and the password has been forgotten, the app must be reinstalled. As a result, all user data, results and settings have been deleted.	
Select user	Select a user here for whom you want to change the user rights: Lock date: Until when should the user be able to train? This is useful, for example, if you regularly call the user in for training. If the lock date has expired, he cannot continue training for the time being. However, you can also disable this option if, for example, you want to do the training yourself.	

Time limit	Here you can define how long the selected user should be able to train daily. Here you have the choice between unlimited up to 10 hours in quarter hour steps. To select a specific time, tap on the arrows and select the desired time - or unlimited - in the number bar.	
Can use settings	If a check mark is placed at this point, the user can open the Settings pop-up menu for training control and sensor definition and make changes there.	
Can delete re- sults	If a check mark is set at this point, the user can delete determined results.	

Choose the settings for the user as you see fit. The operation of the options is self-explanatory or already described above.

Close the window with the button **I** (top left)

# Select new feedback videos (Popup menu 'Administration' - tab 'New favorites')

In this step you will select new feedback videos to be available for training in the future.

- 1. In the main menu, tap the button on the top right (I). The popup menu will open.
- 2. Tap the Administration entry in the pop-up menu. The Administration window opens in the Users tab.
- 3. Tap on the New Favorites tab. An empty field appears. Below this field you will see two buttons.

Button	Meaning	
YouTube	<ul><li>Here you can download videos from the video provider YouTube or link them to the app.</li><li>To do this, your device must be able to access the Internet.</li></ul>	
	1. Search for a suitable video. To do this, you can use search terms or categories to display videos.	
	2. Tap on your desired video. In a window, this will be loaded. This may take a few seconds.	
	3. Now you have the choice whether you want to download the video and add it to the favorites, whether only add a shortcut. Tap the appropriate button under the video.	
	Note: Added videos are only linked and are not avai- lable for training without Internet access.	
Local video	Here you can link videos that you have stored on your device so that they are available for training.	
	<ol> <li>On your device, find out the folders where your videos are stored.</li> </ol>	
	2. Tap the Add button.	

## Operating the Body & Mind app

- After you add the video, a window will open where you can categorize it. This will make it easier for you to select suitable videos later on.
  - You can assign a new or more understandable name.
  - You can define whether the video should be used for relaxation or concentration training - or for both types of training.

Administracja		Sabine Held		
Benutzer	Sabine Held 🚳 📒			
	Sicherheitseinstellund	sen Neue I	avoriten	Liste bearbeiten
				Ok
Relaxing Ocean				
Ingenties for	\$			
• • •	120 🗘			
	- married	(Second Second	Regelite	
increase	toom/too	Marrielle.	(method frag)	
(Industration	Trans.	Familie	Terrent	
100.000	Teacher and the second s	(Instant)	in the second se	
	Manno	(Remark)	( Built)	
	Real I	(Superframe)	Talka	
	4	0		

- You can specify a lower and an upper age limit for which the video is suitable. Children's videos may not be appropriate for older trainees, thrillers may not be appropriate for children.
- You can categorize videos into specific genres to make it easier for you to choose.

The more precisely you categorize the videos, the more specifically you can filter them for specific users later. However, if you work with only a few users, you can keep your effort low here.

5. Once you have assigned all the parameters, close the window by tapping the OK button. The video will now appear in the list of available videos. You will automatically be taken to the Edit List tab.

Here you can see by the button 🛃 whether a video was only added (i.e. linked), or downloaded.

Added videos are only available for training if the end device has access to the Internet during training.

Do you want to add more videos as favorites? Switch to the New Favorites tab and repeat the steps in this chapter (several times).

# Assign feedback videos to users (popup menu 'Administration' - tab 'Edit list').

In this step you will assign feedback videos to a user to perform the training in the future.

- 1. In the main menu, tap the button on the top right (I). The popup menu will open.
- 2. Tap the Administration item in the pop-up menu. The Administration window opens in the Users tab.
- 3. Tap on the Edit list tab. The list of videos available on the device appears. The tab also contains filter options and the user list.
- 4. In the upper right corner select the user you want to assign videos to.
  - If you want to limit the selection of videos to certain genres, tap the 7 (Filter) button. In the window that opens, select the genres that should be offered

Administration	Sabir	ne Held	* 24 % 🗩 11:0
User	Security Settings	New Favorites	Edit Favorites
7		Alter: 0 🗘	- 12/ Sabine Held
Awesome Cycling			Max Mustermann
GoPro Rooftops			Ralph Warnke
Relaxing Ocean			Heiko Hegger
Relaxing Landscapes			Sabine Held
Car racing			Sabilie Heid
Balance			
Boat			
See1			
Funniest animal			
People are awesome 2017 sports			
People are awesome			
	$\triangleleft$	) D	

to the user. Confirm your choice with the blue X in the window.

- If you want the selection to be adjusted to the user's age, you can specify the lower and upper age limits next to the name.
- 5. In the white box behind the video names, select the videos you want to assign to this user.
- Note: You can use the button i to delete videos from the favorites list at this point. This will delete them for ALL users. So use this option wisely.

# Start training (Main menu button 'Training')

### When you

- have established the connection between your end device and the sensor(s),
- defined the settings,
- selected the desired user,
- correctly attached the sensors to the user (see page 30),



you can start with the training.

If you are working alone with the app, the steps are only required at the beginning.

- Tap the Training button in the main menu. Depending on the sensor types you are using and the settings you have made, you will now be offered one to seven training options.
- 2. Select the desired training form:

Symbol	Training form
HEG	Pure HEG training. Measurement of the oxygen content in the blood at the forehead.
Temp. & HEG	Fluctuations in temperature combined with measurement of the oxygen content in the blood.
SC & HEG	Skin conductance at the fingertips combined with measure- ment of the oxygen content in the blood.
HR & HEG	Heart rate combined with measurement of oxygen content in blood.
SC & Temp	Skin conductance at the fingertips combined with fluctua- tions in temperature
HRV	Heart rate
Multimodal	Combined measurement combined with evaluation of all parameters simultaneously.

3. Read the training instructions if they are displayed.

4. In the bottom line, define the parameters for this training session. You have the following options:

Symbol	Values	Meaning and possibilities
	Relaxation	In which training mode should be trained: Relaxation = the values must remain below the thresholds. Concentration = the values must remain above the threshold values
Difficulty	very easy easy Intermediate difficult very difficult	The level of difficulty increases. e.g. the sensitivity of the sensor and reaction speed of the threshold changes - with dynamic threshold. The level influences the number of points the client collects during the training.
	Favorites	Here you can select the feedback video to train with. Only the videos that have been assigned to this user in the Administration pop-up menu are displayed here. The videos are display- ed according to the training mode.
	New favorites	New feedback videos can be selected here again. The procedure is described in the chapter Select new feedback videos.
	Start / Pause / Stop	Control of the training session (not all buttons are visible at the same time)
	One diagram in green mode All diagrams in green mode	Here you can define whether, in case of several training parameters, all of them have to be fulfilled in order to reach the training goal. Or whether the video will continue to play even though only one requirement is met. Note: A bar chart must remain activated for evaluation.
	5 - 120 seconds	Here the display of the line diagrams can be changed.

	(Text field)	Here conspicuities can be noted during the training. Important: Confirm your entry by tapping the 'Add note' button.
K K K	Full screen	Should the video be visible in full screen mode or should the user be able to see the bar and line graphs? This can help, but it can also be distracting.
*	up / down / left / right	Here the sizes of the fields can be changed by moving the buttons.

The yellow highlighted options can be changed before and during the training without interrupting the training.

 Tap on the start button (▶). This will start the training session.

### Interactions during the training session

If several parameters are included in the training, individual values can be removed from the evaluation. Example: The user comes in from the cold and starts training right away. Then the value for this parameter is not very meaningful at the beginning. Especially in the setting  $\blacksquare$ , the movie would possibly be interrupted frequently.

Procedure:

- 1. Tap on the bar graph for the parameter that is to be deactivated and thus removed from the evaluation. The measurement continues. The field is displayed in gray.
- 2. If the parameter is to be reactivated, tap it again.

You can document the deactivation and activation with the note function.

### Tips and special notes:

- If you supervise a person during the training session, make sure that they do not independently change the settings explained in this chapter. This could distort the training evaluation and goal.
- If you notice that the requirements are too difficult or too easy, you can also change the specifications during the training session. For this purpose you can

pause the session with the pause button, but you can also change this during the video. The same applies to the training mode (relaxation / concentration, the display modes (time display, ...).

- Changes in difficulty and mode are registered by the program and noted in the evaluation. Thus, for example, you can quickly switch between relaxation and concentration training with suitable videos to test and train the user's flexibility.
- Clients receive points as a reward at the end of a training session. These points are calculated on the one hand from the percentage of time the client has completed the set task and on the other hand from the chosen level of difficulty.
- When working with physically impaired individuals, we recommend placing the standard HEG sensor in a small neck or abdominal belt pouch and attaching it to the client. The cable can be passed along under the clothing. Especially when people might get motion tics, the risk is so smaller that you tear at the cables.
- The end device does not have to be held in the hand by the client. A terminal stand or similar holder allows the client motor freedom and protects the terminal.
- A Plexiglas or other transparent screen can protect the terminal device from scratches, moist pronunciation, or damage. In addition, a screen protects the client from typing on the end device and thus interrupting or influencing the training process.

# View and evaluate results (Main menu button 'Results')

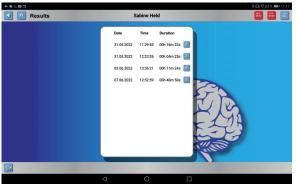
To view this results window, you have the following options:

End training run. Results will be display- Results ed.

OR

• In the main menu tap Results and there tap the line with the result you want to view.

You will see a table and a history curve of the training run, if it was selected in the analysis settings.



Start	Stop	Mode	% correct	% wrong	range	Level	threshold Max.	threshold Min.	points	Menu
00:00	02:37	V	50	50	77.3	very easy		45.0	77	settings
02:37	06:22	Λ	100	0	6.4	middle	69.0	62.0	227	Settings
00:00	03:45	total /\	100	0	6.4		69.0	62.0		<
0000	02:37	total V	50	50	77.3		115.0	45.0		
00:00	06:22	total	75	25	77.3		115.0	45.0	.04	time: 09:44:34
Dis	play	' wit	h 'Th	nresł	nold'	sett	ing.			duration:
Dis Data Thresho State ch	old	122.0- 101.3- 80.5- 59.8-	h 'Th	nresh	nold'	sett	ing.		-122.0 -101.3 -80.5 -59.8	24.11.2020 duration:
∎ Data ∎ Thresho	old	122.0 101.3- 80.5-	h 'Th	nresh				05.20	-101.3 -80.5	24.11.2020
∎ Data ∎ Thresho	old	122.0- 101.3- 80.5- 59.8- 39.0-		02:08	03:1	2 04	16		-101.3 -80.5 -59.8 -39.0	24.11.2020 duration: 00h 06m 22

44.3 121.6 55.2 77.3 65.4 67.2 71.8 6.4 65.4 71.8 67.2 6.4 55.2 77.3 44.3 121.6 44.3 121.6 62.3 77.3

medium

max

spectrum

min

Supplement for setting 'Min, Max, Medium'.

### Hint:

When analyzing the results, a separate table is created for each parameter. Therefore, if several parameters were trained during the training, it is possible to switch between the evaluations.

To do so, tap on the arrow(s) to switch between the parameters.

Image section	Statements			
Sabine Held       Date: 24.11.2020 Time: 09:44:00 Duration: 00h 06m 22 s	A training run was started on 11/24/2020 at 9:44 am. The training lasted a total of 6 minutes and 22 seconds.			
Start         Stop         Mode         %           00:00         02:37         \/            02:37         06:22         /\            00:00         03:45         total /\            00:00         02:37         total /\            00:00         02:37         total /\            00:00         06:22         total /\	<ul> <li>Of the 6 minutes and 22 seconds</li> <li>3 minutes and 45 seconds min in concentration mode (/\) and</li> <li>2 minutes and 37 seconds min was trained in the relaxation (V) mode.</li> </ul>			

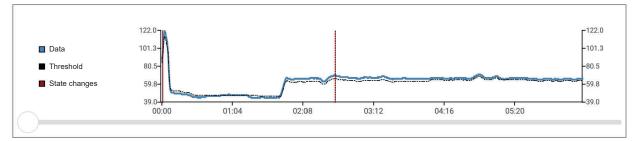
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	After 2 minutes and 37 seconds, the mode was changed from relaxation (V) to concentration (/\).
Mode       % correct       % wrong         ∨       50       50         /\       100       0         total /\       100       0         total \/       50       50         total \/       50       50	During the relaxation phase, 50% of the training was successful and, according to the task, the threshold value was not reached = the feed- back was given. During the concentration phase, training was 100% successful (value above threshold). In total, therefore, 75% of the time the target was met.
Mode     Level     tr       V     Very easy       /\     middle       total /\        total	In the relaxation mode the level was set very easy, in the concentration mode training was done in the level medium.
Mode         threshold threshold           V         115.0         45.0           /\         69.0         62.0           total /\         69.0         62.0           total /\         115.0         45.0           total /\         115.0         45.0	The lowest threshold value was 45, the highest 115. This greatest variation occurred in the re- laxation mode. In concentration mode, the threshold value only fluctuated between 62 and 69. After the mode change, the training course was very balanced.
0.0	(Setting: dynamic threshold value).
Mode         Min         Max         Mittel         Spektrum           \/         44.3         121.6         55.2         77.3           /\         65.4         71.8         67.2         6.4           total /\         65.4         71.8         67.2         6.4           total \/         44.3         121.6         55.2         77.3           total \/         44.3         121.6         65.2         77.3           total         44.3         121.6         62.3         77.3	The lowest value in the Relaxation mode was 44.3, the highest 121.6, thus encompassing a spectrum of 77.3. The mean over time in this mode was 55.2. In the Concentration mode, the lowest value was 65.4, the highest 71.8, thus encompassing a spectrum of 6.4. The mean here was 67.2.
Mode         Id         points           ∨         .0         77           ∧         .0         227           total /\         .0         227           total ∨         .0         77           .0         304	For achieving the goal, the client received a total of 304 points (77 + 227)

Here you will find more detailed statements on the individual values.

Entry	Meaning
Start	Start of the respective training section. If the settings were changed during the training, several entries are displayed here.
Stop	End of the respective training segment. If the settings were changed during the training, several entries are displayed here.
Mode: V	Relaxation
Mode: /∖	Concentration
Mode: total V	Total value in relaxation mode
Mode: total ∧	Total value in concentration mode
Mode: total	Total value calculated on the whole training
% Correkt	Proportion of time in which the task was completed. Target: High percentage of success (>75%)
	Very high success percentage (>90%)
% Incorrect	Proportion of time in which the task (relaxation / concentration) was NOT completed.
N 4: (1)	Target: The lower the better.
Min. <sup>(1)</sup>	Minimum achieved value during training
Max. <sup>(1)</sup>	Maximum achieved value during the training
Average <sup>(1)</sup>	Calculated average value of the measurement seen over the session.
Spectrum	Larger spectrum represents more broadly expressed activation/ relaxation potential. Please note: Abrupt peaks are usually disturbances and should be noted and 'factored out' when viewed.
Level	corresponds to the currently selected difficulty level in the training settings: very easy, Interpretation: Higher level of difficulty is reflected in the success rate. If defined higher, lower success rates tend to be considered good as well.
Threshold Max (2)	maximum threshold reached during training
Threshold Min. (2)	minimum threshold reached during training
Points	Reward / Motivation calculated from the proportion of task completion in combinati- on with the level. This means that the higher the percentage at % Correct and the higher the level, the more points the client receives.

<sup>(1)</sup> - For display setting: Min, Max, Medium
 <sup>(2)</sup> - For display setting: Threshold

The progression curve shows the measurement graphically.



Here correspond

- the blue line corresponds to the measurements [data]
- the dashed line the course of the threshold value during the measurement [Threshold].
- the red vertical line the time when the measurement was interrupted,
- you changed settings and continued the measurement [Change of state]

### Change display

You can change the displays of the result evaluation.

1. Tap the buttons at the bottom of the window. You have the following options:

Option	Values	Meaning
	5 to length of the session	Here you can specify the division of the time span with which the progress curve is to be displayed. If the duration of the session is not specified here, you can scroll to specific points in the session using a scroll bar.
	Notes	Here you can view the notes you have made during the session. If you have not made any notes, the field is grayed out.
₩.	LineGraph	In the evaluation you can show or hide the history curve.
	Min, Max, Medium	The measured values are listed here - minimum measured value, maximum measured value and the determined average value.
	Threshold	Here the thresholds are considered - minimum and maximum threshold.
3	up / down	Here you can change the height of the gradient line window.

### **Delete results**

You can delete collected results.

- 1. In the Results menu, in the list of results, tap the icon behind the result that you want to delete IMMEDIATELY.
- 2. Confirm the deletion with Yes or cancel the deletion process with No.

# Get an overview of the training history (Main menu button 'History')

The training data is stored on the terminal device.

You can view the previous results side by side and get an impression of the changes in the course over a longer period of time.

- To do this, tap the History button in the main menu. On the screen you will get an overview of the workouts you have done so far.
- You can compare these and thus see the progress.
- In addition, you can see from the history how often you have trained with this end device using the Body & Mind app.



- The two upper representations show the training modes Concentration (left), Relaxation (right) divided. In the representation below, both training modes are combined.
- If training was done with the HEG sensor and the TPS, a separate page is generated for each parameter, where the results can be evaluated separately. The heart rate variability (HRV) is divided into three ranges and displayed separately: Very low HRV - low HRV - high HRV.

# Stopping the activity

If you do not want to continue training for the time being, have finished training and evaluating results, close the app to free up memory on your device. In addition, this will prevent the app from unintentionally continuing to download movies.

Turn off the HEG sensor by setting the power/charge switch to the Charging position. This will interrupt the power consumption. You can use the time until the next training session to charge the battery, for example. 'Free' the user from the headband. When removing it, be aware that the Velcro strap may be tangled with hair. So be careful or let the user remove the headband. After removal, clean the headband as well as the sensors.

# **Question list and troubleshooting**

In this chapter you will learn how to proceed in case of difficulties with the Body & Mind app or the HEG sensor.

Error	Suggested solution
It takes forever until the videos are loaded.	<ul> <li>In the Settings menu (from the main menu), change the selection for video quality. The higher the quality should be, the longer the loading time will be.</li> <li>Perhaps the Internet connection is also rather slow. If possible, use a fast WLAN connection.</li> </ul>
The connection between the Body & Mind app and the HEG sensor breaks or cannot be established.	<ul> <li>Check if the HEG sensor is switched on.</li> <li>Check if the Bluetooth<sup>®******</sup> option of your end device is switched on.</li> </ul>
The client relaxes. This can also be seen in the training by the bar next to the video. Nevertheless, the video inter- rupts and only resumes later.	<ul> <li>Probably the training setting Concentration is selected. In this case, the video is only played correctly if the measured values are above the set or dynamically determined threshold value.</li> <li>Interrupt the training with the pause button, switch to the Training settings menu and change the training mode to Relaxation.</li> <li>The same applies if the task has been taught to concentrate and the video is not displayed when the threshold value is exceeded.</li> </ul>
The progression curve of the measured values suddenly only increases until it bumps	The battery charge is no longer sufficient to perform the training. Connect the HEG sensor to the power supply.
at the upper end of the scale.	<b>Recommendation:</b> interrupt the training, fully charge the batteries and then continue the training.
The app was minimized, but not closed. When training is to be continued after some time, it does not respond.	<ul> <li>This phenomenon occurs occasionally:</li> <li>Close apps via the Close All function and call up the Body &amp; Mind app again.</li> </ul>

<sup>\*\*\*\*\*\*</sup> Bluetooth $^{\circ}$  is a registered trademark of Bluetooth SIG, Inc.

The settings of a client can- not be changed in the main menu (button is grayed out).	In the Admin Settings menu, the Can use settings option must be checked for the client. Check this setting by activating with your client data and calling up the client data of the relevant client.
Some videos are not played even though they are listed in the client's favorites list.	Verify whether the terminal device is connected to the Internet. It is probably a video added via YouTube to which 'only' a link has been established. If there is no in- ternet connection, it cannot be used for training - not again until there is an internet connection.
I forgot the admin password	Enter your mail address in your client data. You will receive a mail with which you can then assign a new password.
Bluetooth <sup>®******</sup> indicates that the location detection must be entered.	The location detection is required to connect the end device with the HEG sensor. Activate it in the settings of your end device.
I can't link the TPS to the app. I can't get the sensor settings tab to show up under settings.	You may be using an iOS device. For technical reasons, the option to work with the TPS is currently only available to users of an Android device.
I can't send the results to the therapist.	You may be using an iOS device. For technical reasons, the option to work with the TPS is currently only available to users of an Android device.

<sup>\*\*\*\*\*\*\*</sup> Bluetooth<sup>®</sup> is a registered trademark of Bluetooth SIG, Inc.

In TPS training, some values are outside the target values, yet the video is played.	<ul> <li>There are several possible explanations here:</li> <li>1. There is no check mark in the All thresholds option in the training run. Set the checkmark to force it to be reached.</li> </ul>
	<ol> <li>In the case of dynamic threshold attainment, mean values are assumed with which the th- reshold values are calculated. If the target valu- es are reached for one parameter and partially not for another, the video will be played even for a short time until the values have adjusted and can be reached again.</li> <li>Is a window with the bar display grayed out? If so, the values at this parameter are measured but do not influence whether the video is played. Tap on the gray field so that it has a white back- ground. Then the playing of the video should depend on all parameters again.</li> </ol>

Are there any further questions, errors or problems when working with the Body & Mind app and / or the sensors?

Please contact our technical customer support.

We can then discuss further steps together.

### Attach the HEG sensor to the head

#### Preliminary instructions

- Remove grease, sweat and make-up from the contact surface of the HEG neuro with a cloth. Make sure that the HEG neuro rests directly on the forehead of the user. Hair and make-up should be removed from the contact surface - or at least from the location of the lamps.
- The HEG neuro should be positioned above the eyebrows and orbital bones.

#### Procedure

1. Open the fastener that connects the two ends of the headband. together. Pull the closure parts away from each other. The clasp parts are magnetic, so you will feel a slight resistance.





 Change the length of the headband if necessary. To do this, slide the bar on the wire eyelet at the snap-in clip to the center, pull on the band loop in one direction or the other until the desired length is reached, and slide the bar back to the edge of the wire eyelet. This fixes the length of the headband.



- 3. Place the HEG neuro on the forehead of the trainee. Make sure that the HEG neuro is correctly aligned: the flat surface is against the forehead. The writing on the front (curved surface) should be 'normally' legible, i.e. not upside down.
- **Tip:** If you put on the HEG neuro yourself, you can feel the correct alignment: You can feel the raised lettering at the bottom of the front of the housing, and you can feel the on/off switch at the top as a hemisphere.
- 4. Hold the HEG neuro housing with one hand and pull the headband side with the clip holder above the trainee's ear to the back of the head.

- 5. With the hand that was previously holding the HEG neuro housing, stroke along the other side of the headband and use it to place the band on the head. Pull the band minimally so that the HEG neuro housing remains against the forehead.
- 6. Continue stroking the tape to the head with your hand until you reach the closure clip.
- Insert the closure clip into the clip holder. It is usually sufficient to hold the closure clip over the clip holder. The magnetic ends usually already pull together. Pay attention to the hair of the user. The closure could pull.



8. Correct the position of the HEG neuro housing on the forehead if necessary. It should be positioned centrally on the forehead. The sensor may be too tight or too loose. Then change the lengths of the bands again.

# **TPS sensor: Create finger sensor**

### **Preparation**

• Wash your hands thoroughly - especially the finger on which the TPS sensor is placed. The index or middle finger of the non-writing hand is particularly suitable for this purpose.

### <u>Procedure</u>

- 1. Place the TPS sensor on the upper links of the finger. The silver sensor surfaces should be on the inside of the finger.
- Attach the sensor using the tape attached to the sensor. To do this, place the band completely around the sensor and thread one of the holes around the center retaining button. The sensor should be immobile but not too tightly attached to the finger.





# If you are working with the app for the first time

- 1. Download app
- 2. Link sensors with end device (especially TPS)
- 3. Enter user
- Make security settings (incl. enter emergency email address!)
- 5. Download and categorize feedback videos (favorites)

# If you have already set up everything

- 1. Create sensors
- 2. Establish connection between sensor and end device
- 3. Activate user
- 4. Start training
- 5. View results
- 6. In case of questions: Call on-screen help

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