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Delivery contents
- Mindfield® eSense Temperature Sensor
- 1 Velcro electrode
- eSense app from Mindfield (from the App Store, Google Play or Amazon Appstore)
- Detailed instruction for efficient biofeedback training
**Skin temperature in general**

The temperature at the surface of the skin changes according to blood circulation through body tissue. The small blood vessels (arterioles) crossing through the tissue are surrounded by fibers of smooth muscle, which are controlled by the sympathetic nervous system.

In a state of increased exertion, excitement and stress, these muscle fibers contract, causing a stenosis of vasculature. This leads to a reduction of skin temperature, since blood circulation through the tissue is reduced. In contrast, in a state of relaxation, the musculature is also bound to relax, causing the vasculature to expand. Hence, the skin temperature rises.

Mental stress often leads to a lower peripheral perfusion and a decrease of skin temperature at the hands, caused by increased activity of the sympathetic nervous system. This has a sense of evolution because tension and anxiety originally served the preparation for an impending flight or an attack. As a result, as much blood as possible is available in the working muscles (upper arms, thighs and torso), which is achieved by the narrowing of vessels in the hands, feet and forearms.

For example, think of a speech that you gave in front of an audience or a job interview panel. If you were anxious in those situations, can you remember having cold (and sweaty) hands?

This physiological stress reaction can be useless or even harmful in many contexts in modern society (e.g. mental exertion, worries, psychosocial stress, and anxiety disorder). A conscious control of physiological stress can help you react in a more relaxed and efficient manner to many situations. Biofeedback is an established way to learn this kind of control!
Skin temperature and biofeedback training

To reduce stress and its vegetative symptoms, biofeedback-training can be conducted by striving for a rise of the skin temperature.

Biofeedback with skin temperature is mainly applied in relaxation exercises. It’s easy to handle and learn. Experience with this technique shows a high rate of success and improvement of subjective well-being. In the therapeutic field, skin temperature biofeedback is often used in migraine and chronic pain. If you suffer from a serious disorder or medical condition, always consult a professional physician or therapist, and do not attempt to treat yourself. Biofeedback training is not an officially recognized medical procedure. Hence the eSense Temperature is not a medical device and may only be used for stress reduction training.

A particularly easy and effective biofeedback method is hand warming training. It works with the eSense Temperature sensor attached to a finger, or simply held between the thumb and index fingers. You will learn through direct feedback to intentionally raise the temperature of your fingers, thus increasing perfusion in your hands. The biological temperature sensors in our hands give us only an inaccurate impression of our skin temperature. We can just roughly decide between warm, cool, cold and so on. The real-time feedback with the precise eSense Sensor will give you much more precise information on the perfusion and temperature of your hands, enabling you to learn conscious control of these parameters and your relaxed well-being.
Example measurement curve eSense temperature with peaks in temperature because of several stressors and relaxation exercises

Hand warming training aims to show a person their skin temperature and help them get direct control over the blood circulation in their outer limbs.

Biofeedback training consists of four training stages. For the first training, schedule about 60 to 90 minutes of free time in which you can conduct the training undisturbed and at a stretch.

It must also be differentiated between different types of stress. There is “bad stress,” distress, and there is “good stress,” eustress. You need to ask yourself if you are stressed because you feel overwhelmed and are angry about something or because you are upset. Or are you “stressed” because you are full of drive and are excited? In both cases, the eSense Skin Response shows elevated values, but in the first case only, this is to be judged negatively. In the second case, you can simply enjoy and use the active or euphoric state.
Process of training

1. To train successfully, find a quiet room with a temperature of 20-22°C / 68-72 °F and where there are no phones and sources of distraction. Make sure the room has convenient seating and that you are wearing comfortable clothing. As skin temperature depends also on ambient temperature, you should try to perform each training session under similar ambient conditions.

Use the accompanying tape (or a fabric tape of your choice, e.g. Leukoplast™) to attach the temperature sensor to your index or middle finger. Plastic tape works as well, although it’s less comfortable because it’s airtight and can make your fingers perspire.

2. You should get accustomed to the ambient temperature for at least five minutes (acclimatization), letting the training start while your body is in a relaxed and constant state. This phase of acclimatization can already raise your hand temperature by several degrees.

First stage (observe and experiment; determine your initial status)

1. In comparison with other biofeedback techniques, you will need fewer sessions for a reliable success. 6-10 sessions should be sufficient. To keep focused throughout the entire session, you should limit each session's length to about
30 minutes. If you start feeling tired while training, you should shorten your sessions and practice more often instead.

2. You should record your baseline state for 2-3 minutes at the beginning of each session, letting the sensor temperature adapt to your finger. Sit upright and comfortable, and do NOT watch the temperature but simply let the device measure. The temperature should reach a constant level for the actual training to begin.

3. In your first session, take ten minutes and try to relax. How you do this is up to your personal preferences and possibilities. Do NOT watch the temperature in the app! Training is about measuring whether relaxation already leads to a higher temperature in yourself.

4. Now look at the measured values and whether you have already caused an increase in temperature by relaxing. Were there sections of rising values? Did the level remain constant? Or does the curve drop slowly during the measurement? How do you rate your ability to relax during the measurement? You may already be able to determine a relationship between the curve and the tension or relaxation you are feeling. Regardless of whether you’ve succeeded, familiarize yourself with the feedback in the app. Observe the measured values and test whether you are able to influence the temperature at will. After that, the first training phase is over.

Example for a situation with rising stress; the temperature is falling.
Example for a resting phase with rising relaxation; the temperature rises

5. This is your initial training state. Of course, the day also plays a role here; it may make a difference whether you are measuring after a stressful working day (or even at work) or at the end of a relaxing weekend. **Use the corresponding function of the app to export this baseline as a CSV file.**

You can do this by selecting the measurement in the archive. This will allow you to access your baseline later (in addition to the archive) by other tools (such as Excel).
Before taking another measurement, try to pay attention to the daily activities during which you are more likely to have hot or cold hands. These observations may be useful later in further sessions.

**Second stage (biofeedback training with the temperature feedback)**

1. The second stage consists of multiple sessions. These sessions should always follow the following scheme. Start every session with a 2-3-minute baseline measurement WITHOUT watching the values to reach a steady state.

2. Now you can start to train conscious relaxation, using the feedback signal. Watch the temperature values while relaxing and try to find ways to bring them up. It can be helpful to imagine yourself lying in the sun, relaxing in a sauna, or putting your hands into warm water. You can also work with autosuggestion techniques, telling yourself sentences like, “My left hand feels warm…it feels even warmer now...” Feel free to experiment.

3. As with every activity, regular practice is the key to success. You should be able to raise your skin temperature by several degrees, unless your baseline is already at 33-34°C / 91-93°F. The colder your hands are in the first place, the more potential you have to raise their temperature. In general, your hands can reach a temperature of more than 36°C / 97°F, which is the temperature of your body’s core.

**Third stage (transfer; relaxation without feedback)**

1. Now you can check if a state of deepened relaxation, and the corresponding rise in skin temperature, can already be achieved without feedback. After measuring the baseline as usual, you should alternate between watching and not watching the feedback (two minutes each way). The longer and more often you can keep the temperature up without the feedback, the better your self-control has already become. When you are not using the feedback, don’t look at the values in the app.

2. Perform multiple sessions in third stage. When you can keep your skin temperature up for a prolonged time and mainly without feedback, you have successfully completed this stage.
3. Our eSense app offers not only free training but procedures as well. These are ready-made training programs that you can customize according to your wishes. For the best comparability of training sessions, these should always be performed under identical conditions (same time of day, electrode position and type) and of approximately identical duration. The procedures are a great help. For more information, see the relevant section of this manual.

**Fourth stage (deliberate provocation, relaxation and stress coping)**

1. Finally, you should check if you have acquired improved stress resilience. Start a session with the baseline as usual, then keep your skin temperature on elevated levels (well above 30°C / 86°F) for a couple of minutes.

2. Try to bring yourself into a strenuous situation. You can recall previously memorized everyday situations in which you had cold hands, or situations that made you tense and angry. You can also move to a stressful environment or ask another person to exert a stressful stimulus upon you. Keep the stress situation short and do not overload your ability to cope with it.

3. Now under stress, observe if the temperature drops, and still try to keep the temperature at a high level and avoid temperature drops. Always change phases of stress and targeted relaxation.

4. If you can sustain elevated levels of skin temperature during strenuous situations, ideally at levels above your personal maximum in the first stage, you have learned to remain relaxed and calm even in difficult and stressful situations. You have fully reached the goal of hand warming training!
Functions of the Mindfield eSense App

The eSense comes with the eSense app which you can load for free in the Google Play Store (Android), Apple App Store (iOS) or Amazon App Store.

It offers a wealth of features for effective biofeedback training in a modern design. Essential functions are the display of measured values as bar graph and oscilloscope, feedback via video, music, sound, vibration and new: light with the help of smart bulbs (Magic Blue and Philips Hue). You receive a comprehensive evaluation after each measurement and can compare measurements with each other in the archive and export them as CSV files.

The app is available in English, German, Spanish, French, Italian, Portuguese, Ukrainian, Russian, Turkish, Dutch, Japanese and Chinese. The language is chosen automatically according to the set language of the smartphone or tablet.

Download Links

Amazon: https://www.amazon.com/dp/B073VPZ97R
General view

- **Time elapsed**
- **Momentary value**
- **Overall maximum**
- **Overall minimum**
- **Difference between minimum and maximum**
- **Indicator for rising or falling values**

**Zoom for temperature scale**

**Scale for temperature**

**Momentary value**

**Start and stop of the recording process**

**Settings**

**Instructions / Help**

**Procedures**

**Archive**
Absolute decrease of measured values

Absolute increase of measured values

Swipe the screen to the left or right to change between this main screen and the video view. After the measurement is made, you can also switch to the pie charts.

**Breath Pacer (optional)**

If you have toggled this option on in the settings, you can have the Breath Pacer displayed. In the settings you can choose between line or sphere.
Survey (optional)

If you have toggled this option on in the settings, a survey will appear after each measurement. This enables you to archive reproducible measurements and to document changes in your measurements (if you f.i. change the electrodes type or if you start to use the eSense while lying down instead of sitting).
What is your position?
Choose between sitting, legged/yoga sitting, standing or laid.

Electrode fixation
The first image represents holding the sensor, the second image represents adhesive tape, and the third image represents the finger clip.

How do you feel?
Here you set your mood after the session. This enables you to save your mood in connection with the measurements for the long-term.

Note (here “Test tone and tactile”)
Here you can simply note a free text to the measurement. We suggest noting down special circumstances so that you can classify measurements with a lot of stress or relaxation even much later in time.

Pie charts (after a measurement)
After the measurement (and optional survey), in the landscape mode, a survey appears with a chart: the time proportions of rising, falling or steady values (see screenshot).

Here too you can swipe the screen to the left or right to change between the pie chart and the graph of your measurement.
The pie charts after a measurement
**Feedback Direction**
Select the direction in which you want the feedback to react to. It can respond either to an increase or decrease in the measured values.

**Response time**
The default setting is "Short", which allows feedback to respond quickly to changes in readings. For longer measurements we recommend "Medium" or "Long", then the reaction time will be slightly delayed and the eSense will no longer react to every small change of the measured values.

**Music Feedback**
If the value moves in the unwanted direction (e.g. lower values), the music will become quieter or change its speed depending on the type of feedback you choose.

**Music Preview**
Tab the play button to listen to the selected song.

**Choose music**
You can choose default or your own music.

**Download additional music**
You can download more music as in-app-purchase and use it in the app.

**Music feedback type**
You can optionally choose between music start/stop, volume feedback or playback rate feedback. Note: For iOS are the Restricted options.

**Tone Feedback**
In the background, you can hear sounds from other apps.

**Choose tone type**
You can choose between single or continuous tones.

**Auto Mode**
When this is activated, the range in which the sound changes is automatically adjusted. The minimum and maximum values of the set time window are automatically used for the lower and upper limits of the following interval.

**Value range from-to (Not visible when automatic mode is enabled)**
You can set the area in which the feedback is active. We recommend selecting the range wide at the beginning and to set it smaller over time if necessary. Alternatively, you can use the automatic mode.

**Auto correction time frame (Only visible when automatic mode is enabled)**
You can specify the time window in which the automatic mode adjusts itself each time.
Musical instrument
You can choose from various preset instruments.

Interval
Set an interval for the tone feedback.

Tactile Feedback
Your device will vibrate to provide feedback. Only smartphones support this feature, tablets do not have a vibration motor.

Tactile feedback direction
Decide whether decreasing ("Decrease") or increasing ("Increase") tactile feedback values should be considered a success.

Smart bulb feedback
The light bulb changes its color depending on the values.

Choose a bulb
Choose between Magic Blue or Phillips Hue.

Connection test
With this option, the bulb changes color if the connection is successful.

Breath Pacer
If activated, a breathing aid is displayed during the measurement.

Breath pacer type
You can choose between line and sphere.

Enable audio tone
Tones can also be added as auditory breathing aids.

Inhale time / exhale time
Select the seconds for each inhalation breath and exhalation breath to display the breathing aid.

Hold before inhale / exhale
Select the seconds between inhalation and exhalation breaths

Inhale color / exhale color
Select the color for each inhalation and exhalation stroke of the bar or ball.

Video
Choice: In the dropdown menu, you can select from included videos and "Select your own video". You can select your own videos from your device.

Download additional videos
You can download and use more videos.

Video Feedback Type
Effects can be applied to the video as feedback. You can choose between Start/Stop, Sharpness, Brightness and Saturation.
Session name
Enter the name of your session which will be displayed in the archive here.

Time length X-Axis
You can set the time period displayed on the X-axis of the oscilloscope. We recommend 90 seconds.

Decimal separator
You can choose between comma or dot.

Sample Rate (CSV Export)
This determines how many values per second are recorded. More values (a higher value of Hz) creates more detailed data, but also increases the size of the download file.

Session time length
You can automatically time-limit normal measurements.

Show tutorial
You can watch the tutorial again at any time from the first start of the app.

Survey after recording
Here you can activate/deactivate the survey (position, electrode type, mood, notes) after each measurement.

Markers (here ‘Relaxation’)
If enabled, you can define markers by tapping the + button. These are the markers you can set during a measurement. (See also ‘Set Marker’ in Landscape mode of the general view above).

Chart settings
You can change the colors of the chart and oscilloscope in the general view.

Chart settings
You can change the colors of the graph and the oscilloscope in the general view.

Smoothing of curve
You can adjust the smoothing of the curve in the oscilloscope between 1 (hardly) and 10 (very strong).

Reset to standard colors
You can restore the default colors for the graph at any time.

Arrow raise / lower background color
You can change the color of the arrow in the main view.

Show arrow
You can also disable the arrow in the main view.
The app contains also an archive, in which you can save your measurements and export them as well. You can watch those in detail again, compare them to each other and export them individual or all together (as ZIP file).

**Recordings**

You can see the measurements listed here. You can see an individual measurement by tapping on it.

To select certain measurements and compare them in the Analyze tab, tap on the 3 points in the upper right corner and choose “Select”.

If you want to delete a measurement from this list, you can swipe it to the left (shown from the third measurement).

In the lower area, you see the button to export all measurements as compressed ZIP-data.
Analyze
Here all measurements are listed according to the following factors:


With this, you can recognize trends over time and over several measurements (if, for example, your Average of Session °C is decreasing by regular training, you can see this here at a glance).

Database
You can import and export all measurements as a database (.sql-file). The database is saved locally on the device and can be imported at a later point. For example, in case of a fresh installation of the app. We will add another option of an online backup of the database with an update of the eSense app in the future.

This option is just available under Android right now and will be also available for iOS in the future.
Export data

If you click on the export symbol on the top right, you can export the measurements as a .csv-file with all common apps (f.i., send over the Messenger, WhatsApp, email etc.) or simply save them on your device or in your cloud.

The data are exported as a .csv-file (comma separated values). This format can be opened f.i. with Microsoft Excel or Open Office Calc (for free).

If you like to work with Google, Google Sheets can be an alternative to Excel for you. You can open your exported .csv-files and visualize and access them via the cloud easily from several devices. Google Sheets has almost the same functions as Excel, and the interface is very similar as well.

Notice: We have also created a detailed guide for the CSV export and the processing of your data in a separate guide. This can be found under the following link:

http://mindfield.de/esense-csv-guide
Parts of increase/decrease/steady

In the pie chart you can see the parts in which the measured values were increasing, decreasing, or steady.

Export as PDF File

You can export the measurement also as PDF alternatively. Note: This takes a moment.

In Excel™ or Google Sheets™

Notice: If you open the .csv-file with Excel™ (or Google Sheets™) and your values make no sense, then there is usually a different set language in the eSense App and Excel™ and Sheets™.

Notice: We have also created a detailed guide for the CSV export and the processing of your data in a separate guide. This can be found under the following link:

http://mindfield.de/esense-csv-guide
**Marker feature**

You can also set markers during your measurements. For example, if you have a regular biofeedback exercise which involves breathing calmly at a specific point, you can set a marker in that moment when you breathe calmly. Later in the exported data, you can see the moment where you breathed calmly. Especially in longer measurements with several actions, this comes in handy.

The markers can be displayed especially well in Excel:
Procedures

A procedure consists of several assembled modules. With this new feature, you can build the perfect individual relaxation guide, a stress test, pre-defined biofeedback training or use it for research.

There are many possibilities. During a procedure, your skin response or temperature (depending on the eSense sensor you have) is recorded, and after the procedure, you see your results for each module and in total.

We suggest you test the demo-procedures which are included in the app. Those will give you a guided overview over the different modules and functions of the procedures.

The included procedures are also protected by a password in order that those can’t be edited or deleted by accident. You can any time create a copy of those procedures without a password and change it as you wish.

Procedures Settings

Edit or delete procedure
To edit a procedure, simply swipe it to the left in the overview.

You can then tap the blue pen-symbol to edit the module.

If you want to copy the procedure, tap on the green copy-symbol.

By touching the red trash symbol, you can delete the module.
Procedure editor

Procedure name
Here you can name your procedure with a suitable name (in this example, it is simply “test”).

Decimal separator
You can choose between point or comma.

Sample Rate (CSV Export)
This determines how many values per second are recorded. More values (a higher value of Hz) creates more detailed data but also increases the size of the download-file.

Procedure editor with modules
You can change the order of the single modules by the arrows.

To edit a single module, simply swipe it to the left.

The color of the modules in this overview is determined by your settings in the module editor.

Add Module to procedure
Start to add modules to your procedure by pushing the + -sign!
Add new module

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<th>Procedure general settings</th>
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<td>Procedure name</td>
</tr>
<tr>
<td>Created at:</td>
</tr>
<tr>
<td>Module type</td>
</tr>
<tr>
<td>Module duration</td>
</tr>
<tr>
<td>Module color</td>
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</tbody>
</table>

**Module Type**
You can choose between a text, a video, an audio file, a fixation cross, an arrow or a bar graph.

**Module duration**
Set how long the module will last. Simply swipe the slider to the left or right.

**Module color**
Determine the color of the module in the procedure editor.

Feedback image
Meditation · 1
Overview of the modules

**Text module**
This module shows a text which you can edit.

**Picture module**
The picture module shows either a standard picture from the app or a picture from your gallery.

**Video module**
In the video module, you can choose either the standard video from the app or use your own video.

**Fixation cross module**
The cross changes its color according to the conductance and provides direct biofeedback.

**Audio module**
The audio module is playing a relaxing song. You can choose your own music.

**Arrow module**
The arrow changes according to relaxation and gives you direct biofeedback.
Bar graph module
The bar graph shows your current value and gives you direct biofeedback.

Picture module in landscape format
The procedures can be displayed in landscape format.

Breath Pacer module in landscape format
The procedures can be displayed also in landscape format.

Oscilloscope Type Breath curve (Sphere)
You can also choose one of our guided meditations as a procedure. The breathing meditation is already included in the eSense app. We will also offer four more meditations shortly as in-app purchases.

The meditations thus offer you an easy way to train your awareness and attention and, at the same time, receive biofeedback.
Creation of an example-procedure

1) Tap on the plus icon in order to create a new procedure

2) Give the procedure a name (here “Example procedure”)

3) Scroll down and choose add module to procedure

4) When you are done with the settings of the module, tap on the check mark

5) Add an oscilloscope and breath pacer module

6) Start the procedure by tapping the play button
Supported devices Android
In general, Android smartphones and tablets from Android 4.4 can be used with the eSense without complications.

Your Android device requires a 3.5mm jack (headphone jack) for external microphones, which is built-in into most devices by default.

We suggest the Amazon Fire 7 (from Model 2017 with model no.: SR043KL) as an affordable tablet to use with the eSense.

Supported devices iOS
The following iOS devices can be used with the eSense:

- Apple® iPhone® from 4S
- Apple® iPad® from 3rd Generation
- Apple® iPad® Pro (in combination with a USB-C to 3.5 mm Headphone Jack Adapter)
- Apple® iPod touch® from 5th Generation
- Apple® iPhone® 7, iPhone® 7 Plus, iPhone® 8, iPhone® 8 Plus, iPhone® X, iPhone® XR and iPhone® XS (in combination with a Lightning to 3.5 mm Headphone Jack Adapter)

Additional note Siri: Please note that Siri can NOT be activated while you do a measurement with the eSense app (this applies to all eSense sensors). Otherwise a running measurement can be disturbed and your values be wrong therefore. You have to deactivate Siri YOURSELF (our app can’t do this due to the settings of Apple).

In order to deactivate Siri go Settings -> (General ->) Siri and deactivate Siri (the exact steps can vary depending on the version of iOS).

Additional note iOS 7 and higher: The eSense works through the microphone port. From iOS 7 or higher, you have to allow the eSense app to use the microphone port, otherwise it will not work. During installation, you will be asked for permission to use the microphone port. Please answer with “Yes” or “Allow”. After installation, you can make this setting manually: Allow the eSense app to use the microphone port in the system settings of your iOS device: Settings -> Privacy -> Microphone.
Lightning to 3.5 mm Headphone Jack Adapter

New: Smart Bulb (optional)

eSense Skin response in use with the Magic Blue smart bulb
The eSense app can support biofeedback via smart bulbs. Smart bulbs can change their colors and brightness and can be controlled via Bluetooth. In combination with the eSense app, smart bulbs indicate your level of stress or relaxation via the light from the bulb.

Currently, the eSense app supports the Magic Blue and Phillips Hue smart bulbs. From within the eSense App, you can connect to the Magic Blue or the Phillips Hue and use the smart bulb in your biofeedback session.

We have more information about the smart bulbs in our FAQ: https://www.mindfield.de/en/category/11-esense.html?download=163

**Magic Blue**


**Philips Hue**

You should find the Phillips Hue in every well-sorted electronic store. You can also order online. A list of the on- and offline-merchants can be also found on the page of the Phillips Hue: https://www2.meethue.com/en-us

We suggest you use one of the starter kits from Phillips, with the eSense. This also contains a colored bulb (“Color Ambience”): https://www.amazon.com/dp/B06Y3QXSGX

We recommend the Hue Color ambience for the best experience because with the colors, the feedback can be enhanced with different colors.
Functions of the previous eSense Temperature App

General View

- Moveable training thresholds for the color gradient (hot to cold)
- Momentary temperature value
- Temperature scale (°C or °F)
- Start and stop of the recording process
- Indicator for rising or falling values
- Time elapsed
- Momentary value
- Overall minimum
- Overall maximum
- Difference between minimum and maximum
- Last 60 second’s average value
- Instructions and help
- Same values like in vertical format
- Moveable training thresholds for the color gradient
- Indicator for rising or falling values
- Start and stop of the recording
- Time scale in seconds
Set up of animation

Sweep your finger over the display to change between the horizontal format and the animation.

Double tap on the animation to maximize it.

Move two fingers together (“pinch”) to shrink the animation to its original size!

Rising temperatures keep the animation going, while falling temperatures stop it.

You want to raise your skin temperature, so keep the animation going!

Tap on Custom Video to choose your own video, and tap on Default Video to return to the standard video!

When using iOS, your custom video must be in the "Camera Roll."

Here's how you add a video to it:

1. Send the video to yourself in an e-mail.
2. Open the e-mail in the Mail app.
3. Download the video.
4. Click and hold the video and select "Save to Camera Roll."
5. Now you can select the video from within the eSense app.

A list of supported video formats for iOS can be found here: http://www.apple.com/de/iphone/specs.html
When using Android, your video must be in the "Gallery."

Here's how you add a video:

1. Send the video to yourself in an e-mail.
2. Open the e-mail in the Mail app.
3. The video will be shown as an attachment. Click the dots on the right edge of the attachment and select "save".
4. The video is now in the Gallery and can be loaded by eSense.

As an alternative, you can use Dropbox:

1. Move the video into your Dropbox.
2. Select the video from the Dropbox and export it onto the SD card in the "Movies" folder (in the Gallery).

A list of supported video formats for Android can be found here: [http://developer.android.com/guide/appendix/media-formats.html](http://developer.android.com/guide/appendix/media-formats.html)

### Configuration of auditory feedback

<table>
<thead>
<tr>
<th>Setting</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Audible Feedback on/off</strong></td>
<td>You can always hear sounds from other Apps in the background.</td>
</tr>
<tr>
<td><strong>Volume for negative Feedback</strong></td>
<td>When values move in the wrong direction, the sound becomes quieter:</td>
</tr>
<tr>
<td>0% = mute</td>
<td>100% = undiminished volume</td>
</tr>
<tr>
<td><strong>Feedback Direction</strong></td>
<td>Decide if rising (“raise”) or falling (“lower”) values should count as success for the feedback.</td>
</tr>
</tbody>
</table>

**Choose Song**

Please choose any Audio file.
Feedback Response Time
Adjust how sensitive and quick the feedback will react to a changing direction (rising or falling) of the values.

Export and forward of measured values
After stopping a recording, you can transfer the measured values via e-mail (in iOS, you need an email account for this function).

Five values per second are saved to a CSV file, where every line indicates one value; so, five lines correspond to one second of measurement.

Click on “Submit values” to send a CSV (comma separated value) file to your personal or any other email.

The file can be processed in Microsoft Excel™ or Open Office.

Important note regarding iOS
The previous eSense iOS app is not supported by iOS 11 anymore. Please use the eSense app instead, under iOS 11.
Options for fixation of sensor
You can simply hold the sensor, fixate it with a Leukosilk (medical tape) or use our Finger clip.

Holding
- Holding between index finger and thumb.
- No additional equipment necessary.

Leukosilk (medical tape)
- Mounting on a finger or the palm.
- Fixation with Leukosilk.
- More comfortable.
Finger Clip

✓ No sticking.
✓ No heat accumulation.
✓ Best fixation of temperature sensor.

Our recommendation

You can order the Finger Clip here:

Extending the cord of the eSense

If you wish to use a longer cord between the eSense and your smart phone or tablet, you can extend the original cord of the eSense with a common, 4-pin, 3.5mm jack headset extension cord. We have tested three cords that have worked well:

2m cord: http://amzn.to/2kJwqBM
0,5m cord: http://amzn.to/2kKEONs
110cm cord: http://amzn.to/2jJg1LZ

All three suggested cords cost between £6-8 and are available from Amazon. Alternatively, you should be able to use other 4-pin cords as well.
EC Declaration of Conformity for the Mindfield eSense

In accordance with the following directive(s):

RoHS - Restriction of (the use of certain) hazardous substances (2011/65/EU)

The manufacturer

Mindfield Bio-systems Ltd.
Hindenburgring 4
D-48599 Gronau
Germany

WEEE-Reg.-Nr. DE 24465971

hereby declares that the following product:

“Mindfield® eSense Temperature”

complies with all applicable essential requirements of the directives.

It is in conformity with the applicable requirements of the following documents:

DIN EN 60950-1 Information technology equipment – Safety – Part 1: General requirements (2011-01)

DIN EN 55022 Information technology equipment - Radio disturbance characteristics - Limits and methods of measurement (2008-05)

DIN EN 55024 Information technology equipment - Immunity characteristics - Limits and methods of measurement (2011-09)

Place: Gronau
Date: 19th of August 2017

Niko Rockensüß, Managing Director

The Mindfield eSense has to be recycled as electrical waste according to the legal requirements.
WEEE-Reg.-Nr. DE 24465971
Privacy policy

The eSense App does not collect any personal data, such as name, gender, date of birth, etc.

Each recording of measurement data is done under a general prefix such as "measurement", supplemented by with the eSense sensor used, the current date and time of the measurement. The recorded measurement data cannot therefore be assigned to any person.

The prefix of a recording, e.g. "measurement", can be changed by the user in the settings and used for the assignment to a person. Users can decide whether to change this prefix to their name, for example. Then each measurement and also each CSV file exported from it contains the name of the user in the file name.

Access rights within the eSense App

1. Microphone input: Access to the microphone input is required to receive measurement data from the eSense sensor at all. This access is mandatory.

2. Access to media library: Access to photos, music, and videos is only required if you want to use your own photos, music, and/or videos in the eSense App. The eSense app should be used as feedback. It is also possible to use only the by the app supplied media.

3. Access to the location: The access to the location (activation of GPS) is only required for the Bluetooth connection to the Magic Blue bulb (optionally available) or the eSense Pulse. This is mandatory under Android and lies outside the possibilities of the publisher of the eSense App. No standard data is collected, the standard function is not used.

4. Access to Bluetooth: If the eSense app is used with the Magic Blue smart bulb to provide biofeedback by modifying the color and brightness of the light bulb, it needs to be connected via Bluetooth within the app. To do this, the Bluetooth function is used. For the eSense Pulse Sensor, Bluetooth is also required as it transmits the data via Bluetooth.

Transmission of anonymous usage data and crash reports

In order to improve the technical stability of the eSense App and the detection of code errors, we use the Sentry service. Sentry serves these purposes alone and does not evaluate any data for advertising purposes. The transmission takes place anonymously and only with an existing internet connection.

Processed data

Usage data, metadata (device ID, device data, IP address).
Special protective measures: IP masking, immediate deletion.
Privacy Policy: https://sentry.io/privacy/.
Processing in third countries: USA
Deletion of the data: Information on the device or time of error is collected anonymously and is not used for personal purposes and then deleted.

Medical information

The Mindfield eSense sensors are not medical devices and may therefore only be used to reduce stress. If you suffer from an illness, do not carry out any treatment on your own and always consult a therapist.
Warranty by the manufacturer

The statutory warranty obligations apply to all our products. If you have any problems with our products, please contact us directly. See the "Contact" section of this manual.

Contact

Manufacturer

Mindfield® Bio-systems Ltd. · Hindenburgring 4 · D-48599 Gronau · Germany

Tel: + 49 (0)2565 406 27 27 · Fax: + 49 (0)2565 406 27 28 · E-Mail: info@mindfield.de

For questions, problems and in case of warranty, please contact us via email or visit our website at www.mindfield.de for more information.

Please send never unprompted packages to us. Unfree returns will not be accepted and cannot be processed.

Your Notes

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