



Physical Activity Monitoring Barcoder

Thank you for purchasing our Physical Activity Monitoring Package. Gait Up's goal is to provide you with meaningful parameters describing daily activity obtained from a single inertial sensor. We hope you will enjoy working with your Physical Activity Monitoring Package, and we welcome your suggestions for future improvement.

Together with Gait Up's Activity Monitoring Barcoder software, the Physilog[®] 4 offers quantitative assessment of activity patterns during mid and long-term monitoring. The results are presented in an interactive barcode visualization which allows to provide feedback to the patient with a clear report.

Physical Activity Monitoring Package



- Tegaderm™ medical tape
- Transport /storage box
- Gait Up Contact card
- Physilog® sensor
Physilog® 4 Silver 10D
- USB>micro USB cable
- Activity Monitoring Barcoder Software
License on USB key

Recording with *Physilog*®



Attach

- Fix the Physilog sensor to the trunk of the subject with medical tape (f.ex. Tegaderm®)

Start

- The subject should be in a upright position to start the measurement
- Press the button for 1-2 seconds
- The LED is blinking green every second
- > **Physilog® is recording**

Monitor

- Ask the subject to perform one stand-to-sit or sit-to-stand movement
- The subject can then continue daily activities as usual or you can start your protocol

Stop

- Once the monitoring period is completed, press on the button for a few seconds
- The LED shines orange, then blinks 3 times green and then turns off
- > **Physilog® has created one file and stopped recording**



Charging and Data Transfer

Plug

- Plug the micro USB to the Physilog®
- Plug the USB to the Computer or Charger*



Charging

- When connected to the computer via USB port or a charger*, the LED blinks **orange**
- > **Physilog is charging**
- When it is fully charged, it shines **green**



*Charger is not provided by Gait Up. Gait Up declines any responsibility due to charger usage. Please refer to supply voltage in the product specification section.

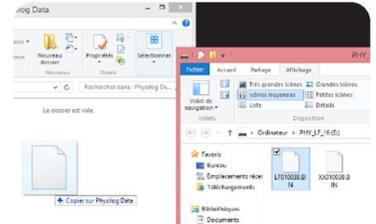
Connect

- When connected to a computer, the LED is blinking **multicolor**
- Wait for few seconds
- > **Physilog® is connected to your computer**



Transfer

- Copy and paste Physilog® files (*.bin) to your preferred destination



Analysis with Activity Monitoring Barcoder Software

Plug

- Plug the USB with Activity Monitoring Barcoder Software to the computer



Open

- Open software from USB key location



Analyse

- Choose your options (details below) and click «Analyse»
- Select your Physilog® files to be analysed

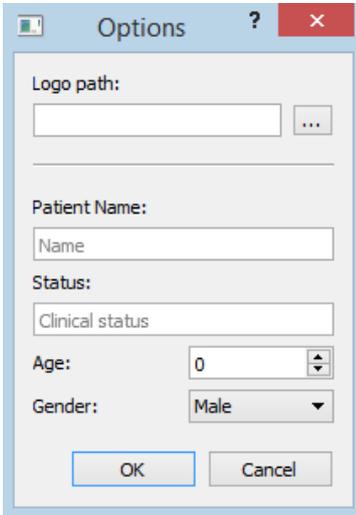


Interpret

- Open html report and analyse the activity pattern and evaluate pre/post treatment changes



Activity Monitoring Barcoder Software options*



The first option allows to select a logo of your institution to be added onto the report. Once a picture selected, it will be saved for later analyses. The logo must be in .png format and should have a size around 300x200px.

It is possible to add some information about the test subject like the name, age and gender. The software also allows to write a short description of the Clinical status of the person wearing the system.

Important Remarks

- Sensors can be placed anywhere on the upper half of the trunk (above the belly button), the subject should be in an upright position when fixing the sensor and has to perform one stand-to-sit or sit-to-stand movement within the first 5min of the measurement in order to calibrate the sensor axes.
- Make sure Physilog® sensors are fully charged before doing measurements (LED either shining green or off while plugged) to benefit from the maximal battery life. If the monitoring period includes several days of measurement, the sensor should be removed, turned off and plugged to charge each evening and measurement restarted the morning after.
- The Physilog® 4 is not waterproof, it should not be worn during showering or for watersport activities.
- The sampling frequency of the Physilog for the Physical Activity Monitoring must be at least 40Hz. For long-term monitoring, the magnetometer can be removed from the measurement configuration to produce smaller files and reduce power consumption.
- Note that Activity Monitoring Barcoder Software cannot be copied: it only works when the USB key containing the Physical License is plugged.
- Refer to Physilog®'s user manual concerning handling & warnings, warranty and specifications. You will find it on the support section of our website

Outcome parameters

Gini index



The Gini index is a measure of the pattern of accumulation of periods of a certain type (f.ex. walking). It comes originally from economy where it is used to describe the distribution of revenues of a country. In Physical Activity Monitoring it has been shown that this measure may better distinguish differences of sedentary behavior than the total sedentary time [1]. The Gini index has a value between zero and one, where a high value indicates that there were rather few but long periods of the analyzed activity. A low Gini index means that the total time was accumulated in a more fragmented way.



Complexity



The complexity of the measurement period is obtained through the entropy of the barcode. This parameter describes the subject's capability of altering motor behavior to adapt to different task demands.

Accelerometer count



The Accelerometer count is solely based on the accelerometer sensor and is calculated using a standard procedure comparable to other commercial actimetric devices. It measures any bodily movement that results in an increase in energy expenditure above resting levels.

Postural transition number



The total number of sit-stand and stand-sit actions performed during the measurement period. Postural transitions are outcomes of the functional independence.

Walking parameters

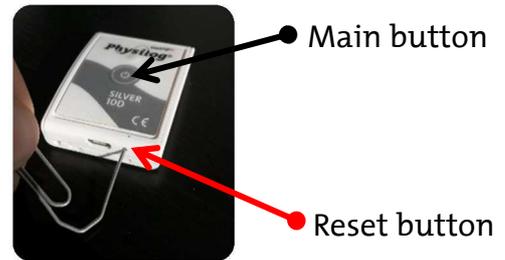


Average duration of walking periods and the average number of performed steps per minute. Walking is a fundamental physical activity and its degree of intensity is depending on cadence.

[1] "Methods for objective measure, quantification and analysis of sedentary behaviour and inactivity", S.F.M Chastin, M.H.Granat. Gait & Posture 2010, Vol. 31, p. 82-86

Troubleshoot

1. First, Visit FAQ on the website:
<http://www.gaitup.com/download>
2. If Physilog® is not working properly, please do a simple reset:
Press the reset button once. LED blinks **ORANGE**, then **RED**
3. If Physilog® is really not working, please do a master reset:
Maintain the reset button, then maintain main button, release the reset button, and once LED has stopped blinking, release main button. LED blinks **ORANGE 3 times**
Warning: this operation formats the device and data stored on the Physilog® will be lost
4. If you still have a problem, email it to: contact@gaitup.com,
Please indicate Physilog®'s number and attach problematic .bin files if any



At Gait Up, we welcome your feedback and questions.

Please contact us at:

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