

AiperMotion 440 PC

User Manual



Introduction

Dear Customer,

Thank you for purchasing an Aipermon product. You have chosen a valuable and innovative product to measure, record and analyze your everyday activities. Please take the time to read this manual thoroughly before using your product for the first time.

Best wishes for an active and healthy future!

Sincerely yours,

Aipermon GmbH & Co. KG

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1 Introduction to the energy balance coach AiperMotion 440 PC

The AiperMotion 440 PC is a device which is able to record your movement and take nutrition notes. Your personal energy balance is calculated from energy consumption and nutrition intake, measured every minute up to the whole day, as well as long-term tracking using the software AiperView.

Mode of operation:

Upon using the device for the first time, you need to enter your gender, year of birth, height and weight. According to these values, the device will calculate your basal metabolic rate.

Each of your movements is measured with a three-dimensional acceleration sensor, and is then combined with your previously entered body data to calculate your energy consumption via motion. Values displayed on the device will update once per minute. Because some sports (e.g. swimming) cannot be covered, you have the option to enter the sum of calories consumed by activities manually.

Analysing the energy balance is quite simple:

Every day your basal metabolic rate will be set as negative calories to your energy-account. Every nutrition-entry brings this value closer to the zero line. Every movement reduces the consumed calories and takes it away from the zero-line. If you stay on average in the minus range, you tend to reduce your weight.

The AiperMotion can help you turning exercise and food intake in balance. This includes enough daily movement. This can be done by your everyday movement or doing exercises. Both count! There are many possibilities to increase your exercising motivation.

Set yourself a goal by entering your own desired values per day. You can do this based on movement times, distances or defined calories.

Have you brought your energy-balance successfully into the minus-range your scale will show it to you with a reduced weight. Adjust your actual weight frequently directly on the device to gather correct energy calculations. Like that your success will be documented in the AiperView software over long-term.

The energy budget is very individual. Therefore, the energy-balance tends to vary. It cannot be entirely precise, which makes an individual value adjustment for some users necessary. The device is able to do this for you. The highest risk of failure with AiperMotion is that the user forgets entries or cheats himself. The most important prerequisite for successful usage of this new technology is the willingness to bring the personal activity-level and the individual's eating habits into a healthy balance. AiperMotion helps you to keep track of these factors in an uncomplicated method, enabling long-term success along the way. Due to current research results regarding desired weight loss, consultation and supervision of professionals are recommended during first-time use of the device. This has proven to increase the success rate at losing weight. The consultant recognizes common

misconceptions regarding nutrition, gives first-hand advice on everyday exercise and motivates to long-term perseverance. The goal is not just to lose a few pounds of weight in a matter of few weeks but to reach a desired weight and sustain it in the long-term.

AiperMotion enables you to learn much about your diet and exercise behaviour. It allows you to keep track of the everyday progress of your diet. Setbacks in the form of a positive energy balance are no reason to give up. It is easy to bring it back to balance in the long-term using the software's long-term balance function.

For the use of the AiperMotion energy-balance coach you only need to follow two simple premises:

- You need the motivation to reach your personal wellness weight through a healthy lifestyle - with a balanced diet and sufficient exercise.
- You need the will to change something about yourself, to finally have a sustainable success - your desired weight.

We wish you much success!

1.1 Basics

1.1.1 Energy balance

The energy balance of every person is gathered from the energy intake from food and the energy consumption. Energy consumption is determined through the main factors basal metabolic rate and motion.

The basal metabolic rate is the amount of energy which a person must spend every day for self-preservation. It is determined by age, sex, size and weight. A number of methods of measurement and formulas to approach the basal metabolic rate of a human are known. The device uses the well-known Harris-Benedict formula as well as the later developed correction formula for the heavily overweight (BMI > 30).

The basal metabolic rate fluctuates daily. It is prone to be influenced by factors such as stress, disease and extreme outdoor-temperatures. Also, a long-term influence of the basal metabolic rate is your way of life - e.g. the level of personal fitness.

1.1.2 Activity

The second main factor of the energy balance is activity and the resulting activity amount. Contrary to the basal rate, this can be influenced on a daily basis, plus it will vary greatly. If someone sits all day, it will turn out low. On the other hand, the activity amount will increase significantly if the same person moves around intensively, over a long period of time.

Example: 40-year-old woman, 5' 9" (175 cm) tall with a weight of 165 lb (75 kg).

With basal metabolic rate of 1500 kcal (6280 kJ) her activity amount could only be 300 kcal (1250 kJ) per day if the woman is driving to work, works sitting down and barely walks during her work day. On the other hand, 1200 kcal (5025 kJ) would be possible if she had more physical activity during the day with lots of walking, cycling and general activity during working hours or housework. A daily routine with only a small amount of physical activity would require 1800 kcal (7530kJ) energy, while she would need 2700 kcal (11.300 kJ) of energy on days with a higher amount.

1.1.2.1 Information regarding your daily movement requirements

The cardiovascular approach

The World Health Organization (WHO) recommends that a healthy adult should spend at least 30 minutes with intense physical activity each day in order to maintain good circulation and a healthy body. This can be achieved by walking, Nordic walking, jogging or doing other similar activities.

With the AiperMotion, this means that each day the device should show at least 30 minutes in the activity classes "walk fast" or "jogging".

The holistic approach regarding activity

In the holistic approach regarding activity, the WHO is estimating that each adult needs a certain amount of activity every day to stay healthy and maintain his weight.

With this approach, any activity is covered - housework, gardening, climbing stairs, tidying up, walking, sports etc. Ideally, one should consume 50-60% of his basal metabolic rate daily by activity in order to remain healthy and keep his weight.

Example: For a basal metabolic rate of 1500 kcal (6280 kJ) (woman, aged 40, 5' 9" (175 cm), 165 lbs (75 kg), 750-900 kcal (3140-3770 kJ) should be consumed by activity.

The calculation of the desirable activity amount is made by using the PAL factor (PAL = Physical Activity Level).

The PAL factor can be calculated by the AiperMotion if the device is worn all day long. It is evaluated by the software. To lose weight with sufficient activities, a PAL-factor of at least 1.6 is recommended by the WHO ¹.

1.1.3 Nutrition

Healthy nutrition always includes adequate as well as balanced nutrition. With the AiperMotion you are able to document your obtained energy in kcal or kilojoules and thus the volume of your food intake.

Scientific based approaches to weight loss recommend a combination of an optimal diet composition (in terms of which and how many carbohydrates, fats, proteins, vitamins and trace elements should be combined) and a total amount of energy. For the qualitative composition of the diet there are several successful diet approaches. You are free to choose your favourite diet system. AiperMotion supports your diet success because you constantly see what you do.

AiperMotion helps you in documenting and observing the quantity of your nutrition.

1.1.3.1 Nutrition notes with the AiperMotion 440 PC

The energy requirement of an adult is calculated from the sum of both basal metabolic rate and total activity amount, according to the current state of nutrition science.

This total amount of energy - expressed in kcal or kilojoules - is distributed on meals and drinks.

For the nutrition input scheme in AiperMotion, the following model has been used:

The user eats 5 meals per day - breakfast, warm meal, cold meal and two snacks, and besides water and diet drinks he has two small non-diet drinks.

If the meals had a "normal" size, the user would reach an even-levelled energy-balance. The meals are calculated via a specialised system for each user.

Since a woman weighing 110 lb (50 kg) needs less food per day than a 220 lb (100kg) man,

¹ UNO Document, excerpt taken from: Nevin S. Scrimshaw. John C. Waterlow and Beat Schürch, Editors: International Dietary Energy Consultative Group. Proceedings of an I /D /E /C /G Workshop held in London, UK, October 31 - November 4, 1994 (<http://www.unu.edu/unupress/food2/uid01e/uid01e08.htm>)

the amount of energy per meal is applied to each user. Naturally, a lot of people in highly developed industrial countries eat standardized food portions, but the 'small' woman from our example would sometimes leave more food uneaten than the 'larger' man. If the energy values are declared on packages and food wrappers, they should be used for the documentation with the AiperMotion because every exact value is better than a standardized pre calculated one. The grid is especially useful for keeping notes during lunch, from canteens or restaurant meals or buffets.

Even though the meals do vary from day to day, good average values which are helpful for the control of one's energy-balance are achieved.

Because non-diet beverages usually are bottled in set quantities, the scheme offers two common sizes: 0.2-0.3 l (6 - 10 fl. oz.) as a small beverage and 0.5-0.6 l (13 - 20 fl. oz.) as the large beverage. Calorie amounts in beverages vary greatly.

The grid is only a rough guide which will help you in everyday life. We recommend you to look up the value of your favourite non-diet beverage on its nutrition information table and to enter it as an exact value into the device. For rarely consumed beverages the grid value can be used for your documentation.

Everything that we do not necessarily need, but yet is loved and enjoyed by many people, we have created the input term "Treat". This category includes sweets, snacks, ice cream, cakes and often favoured sweet beverages such as iced coffee, liqueurs or cocktails. The term is intended as a reminder that the quantity of these calories should be borne in mind during a period of a diet. Latest research states that it is better not to entirely avoid it but to enjoy it in strict moderation.

The calorie amount of "Treats" is often printed on the packages and wrappers today. If such an indication is available, it should be entered as an exact value.

The documentation of nutrition with the AiperMotion will always be an approximation to the actual food intake. A comparison of an accurate, detailed transcript with a calorie-table and a schematic entry into AiperMotion held a deviation of less than 10%. The two major sources of inaccuracy of the nutrition transcript can be found on a psychological level. The first risk is that you forget to make entries - especially at night or if you have quickly eaten something between meals. In this case you should add this snack either in the device itself or in the AiperView software to avoid distortion of the energy-balance in the long-term.

The second risk is that you are not honest to yourself - e.g. you have eaten something and although you know that it was a very large portion you just enter a normal one.

Or you entered the first non-diet beverage but omitted the second one. This happens to many users! If this happens, enter it afterwards into the device or the software when you use it. Even if it is added onto the balance for the next day! This way, your balance will be more correct in the long-term, as opposed to not entering the intake you forgot.

1.1.4 Weight

AiperMotion aids you to keep track of short-, medium- and long-term weight development. After initial input during the setup of the device, you can enter your weight changes as often as you want. Diet coaches recommend to do it only once or twice a week to document possible weight-loss success.

After entering your weight on a daily basis, it can differ by 2 - 4 lbs (1-2 kg) within a week. This is normal! Real success can only be observed at medium-term. A weight loss of 4 - 6 lbs (2-3 kg) per month is recommended as a long-term goal. Short-term fluctuations in weight are often modified by hydrological factors.

It is much more useful to get to know your own energy requirements with AiperMotion and to set a moderate negative energy balance as a goal.

An example: A 40-year-old woman consumes 2200 kcal (9210 kJ) per day at the beginning of her AiperMotion use - 1500 kcal (6280 kJ) via her basal metabolism and 700 kcal (2930 kJ) via basic activity. She plans to increase her activity to 1000 kcal (4190 kJ) per day. She limits her food intake to 1800 kcal (7535 kJ).

	Basic Value	Value during diet
Meal/Drink	2300 kcal / 9630 kJ	1800 kcal / 7535 kJ
Basal metabolism	1500 kcal / 6280 kJ	1500 kcal / 6280 kJ
Exercise	700 kcal / 2930 kJ	1000 kcal / 4190 kJ
Balance (kcal)	+ 100 kcal / 420 kJ	- 700 kcal / 2930 kJ

To lose two pounds of body weight you have to take in 7000 to 9000 kcal (29.300-37.700 kJ) less than you have consumed. For the user in our example, this would mean that she would reduce her weight by about 4.4-6.6 lb (2.5-3 kg) over the course of one month if she reaches her goals for the month on average.

1.1.5 Energy balance and weight reduction

The highest weight loss success can be reached with the help of a professional adviser. He is able to give individual advice, motivational feedback and helps to solve problems, if no progress is in sight.

For users who like to use the AiperMotion without coaching, the following list helps to establish and implement a simple diet plan suitable for everyday use. Try to increase your daily activity to a Physical Activity Level (PAL-value) of 1.6 to 1.8. If you already reach this value on average, you are showing a sufficient activity amount. Any activity counts!

- Learn to benefit from every little opportunity of everyday exercise to reach a higher level of activity. Set yourself in motion more often, more intensively and faster, as often as possible in your everyday life. Use stairs, short walks and housework as your personal fitness training.
- Substitute sitting and standing by walking around as often as you can.
- In your free time, find extra activity which is fun and easy to integrate in your everyday life - this may be walking, cycling or any sport.

Your energy balance should show a moderately negative value to lose weight, so you will lose 4 - 6 lbs (2-3kg) per month. Success of the first month might be considerably higher if your energy balance was at a positive value before. The minimum energy intake per day should not be less than the basal metabolism rate. Hence, if you have a basal metabolism rate of 1500 kcal (6280 kJ), your food intake should not be less than 1500 kcal (6280 kJ) per day. If your body does not get enough energy it will switch to an "emergency program" which will reduce the basal metabolism rate.

Instead of fat cells, muscle cell loss will set in. You will also begin to start feeling cold more often, and tend to fall prone to cravings, if you take in too little energy. The resulting frustration and stress leads many people to an early surrender of the diet plan.

If you normalise your eating habits after a radical diet phase your body will store the fat quicker - the known yo-yo effect! Long-term and lasting success can only be achieved if a moderate negative energy balance is reached during the diet-phase, one which stays at a maximum of 500 to 700 kcal (2095-2930 kJ) below your daily total energy demand (including activity amount). To limit food intake we recommend that you follow three main rules:

1. Have your meals regularly three times a day. Supplement your main meals by 1-2 healthy low calorie snacks if you get hungry. Avoid non-diet drinks to quench your thirst.
2. Get to know your personal food traps and reduce them by setting limits, regarding sugar or alcohol consumption, for example. Limit does not mean giving them up altogether! Complete renunciation cannot be endured for long! A small "treat" as a daily reward will motivate you to last through your diet plan!

3. Check your nutrition plan for foods with high carbohydrate values and replace them more often by low-calorie-alternatives - for example cottage-cheese instead of butter, low-fat ham instead of cold cuts. You should buy a commercial calorie guide and find out how you can replace food items. In addition, add more fruits and vegetables to your meals. Replacing often does not mean replacing each and every time! Only changes to your long-term behaviour will lead to success! Short-term renunciation will not work out!

You will learn how to eat consciously on using AiperMotion! Enter any food intake immediately, if possible.

Also do this if you have forgotten to do so on the first occasion.

Users with severe overweight are recommended to seek professional advice and supervision during the first period of use of the AiperMotion. Their energy budget and metabolism has not been in balance for a long period of time, therefore it is particularly difficult for them to restore their balance on their own.

If you have a specific diet nutritional protocol to follow, AiperMotion is a good supplement on your way to success! The device gives you an extensive self-control opportunity.

2 General safety information

- The AiperMotion is designed for adults. Due to children's growth they have a higher energy consumption than their body measurements suppose to be. For that reason the system should not be used for children. Also for young people and underweight the device should only be used under professional guidance.
- Enter your personal data correctly. Incorrect entries distort the basal metabolic rate calculation, the calculation of food intake and energy balance.
- Don't use the AiperMotion during sports where the wearing increases the risk of injury. The energy consumption during exercises can be entered manually.
- It is particularly important for users with heart and/or circulatory problems to talk to a doctor or professional about the exercise program.
- Charge the AiperMotion at least every 7 days and do not let it sit unused for too long to prevent loss of data.
- Do not use the AiperMotion if the case or the cord is damaged.
- Patients with pacemakers: Keep a distance of at least 20 cm (7.8 in) between the device and the pacemaker.

Electromagnetic Compatibility (EMC)

The ever-increasing number of electronic devices such as computers, cellular phones and microwaves can lead to an electromagnetic disturbance in medical devices. Electromagnetic disturbances can lead to failure of medical devices and can give rise to a potentially unsafe situation. Medical devices also have the potential to cause electromagnetic disturbances in other devices; care should be taken to avoid this.

The IEC60601-2 standard was introduced as a way to control the electromagnetic tolerance of devices in order to avoid potentially unsafe situations. This standard defines the level of immunity to electromagnetic disturbances and the maximum electromagnetic emission values for medical devices. The devices manufactured by Aipermon fulfil the IEC60601-2:2001 standard regarding both immunity and emission.

Nevertheless, the following precautions should be taken:

- Do not operate a microwave or other devices that produce a strong electromagnetic field in close proximity to the AiperMotion. Doing so could lead to failure of the AiperMotion and to a potentially unsafe situation.

3 Purpose

The energy-balance calculator AiperMotion is a combined measurement, calculation and input device. It provides a daily long-term acquisition, personal observation and analysis of movement, nutrition, metabolism and weight to determine the daily personal energy balance. The device can be used for managed programs in the field of increasing movement and reducing weight. It can also be used by individuals without a supervisor.

Hints:

- The AiperMotion can be used by adults with normal weight or overweight.
- The AiperMotion is intended for the use under normal everyday conditions in indoor and outdoor environments.
- *Motion measurement:* The device can detect and measure movements without using training equipment if it is worn on the hip. The training with the help of fitness equipment (ergometer, cross trainer, stepper, rowing machine) or recreational equipment (such as cycling, in-line skates) can subsequently be entered.

4 Product description: Overview

4.1 Entering calories

The documentation of food intake has been very exhausting until today. For AiperMotion 440 PC a scheme has been developed in collaboration with nutritionists, that has simplified this documentation.

This scheme is based on the assumption of an individual energy demand:

- The amount of energy of meals is calculated based on the entered personal data. The "Warm Meal", "Normal" of a woman with 110 lbs (50 kg) weight will consequently be lower calculated as the "Warm Meal", "Normal" of a man with 175 lbs (80 kg) weight. The calculations are applied to "Breakfast", "Snack", "Cold Meal" and "Main Meal".
- The meal size can be selected between "Mini", "Normal" and "Maxi". For a warm meal the additional option "XL" is provided.
- In addition, the food intake with precise values can be entered manually. The input "Exact value" should always be used, if this value is known.
- Drinks will be uniformly counted according to their volume. 6 - 10 fl oz. (0.2-0.3 litre) correspond to the input "Drink Mini". 13 - 20 fl oz. (0.4-0.6 litre) correspond to "Drink Maxi".
- "Treats" are additional extras to food to cover the energy that is not needed. "Treats" are counted for each user equally. There is a division into "Mini", "Normal" and "Maxi".

More detailed instructions on how to use the input scheme are described in chapter 6.2 of this manual.

4.2 Calculation of basal metabolism

The basal metabolic rate (BMR) is calculated according to the Harris-Benedict formula based on user input. For users with a BMI over 30 the correction formula with the ideal weight by Broca is applied² too.

2 A detailed description of calculation can be found on en.wikipedia.org under the keyword "Basal metabolic rate"

4.3 Measuring movement and manual movement input

The AiperMotion measures three-dimensional acceleration differences and uses this information to calculate values and facilitate measurement of everyday movement. The AiperMotion classifies body movement into four activity types:

- Active Daily activity without taking steps, for example house, office or garden work
- Walk slow Movement at a speed up to 5 km/h (3.1 mph)*
- Walk fast Movement at a speed of 5-7 km/h (3.1 - 4.35 mph)*
- Jogging Movement at a speed higher than 7 km/h (4.35 mph)¹

When the user is resting - seated, lying down or standing still - the AiperMotion registers this as „Passive Time“. The classification into activity types “Walk slow”, “Walk fast” and “Jogging” is determined by step frequency and intensity.

The AiperMotion can record data for the last 6 weeks of use but only shows the last 7 days on the device itself. The optional software AiperView enables the user to view the entire time period. After 6 weeks, the oldest data will be overwritten.

4.3.1 Manual input of exercises

Movements can also be entered manually. For strength training, swimming, cycling and aerobics the device provides formulas to calculate an estimated value of consumed calories with your input of the duration and intensity of movement. Any other activity can be entered as self-calculated calorie or kilojoule-value. The manual entry is recommended for many sports.

* These speeds are applicable for people how are about 5'9" (175 cm) tall. Shorter people reach the “Walk fast” classification with the same step frequency. Shorter steps mean a lower speed.

4.3.2 Precision of the measurements

The accuracy of the movement class assignment is > 95%.

In the AiperMotion a method of distance measurement is integrated. Distances are calculated with the measured steps, entered step-lengths and the activity class ("Slow", "Fast" or "Jogging"). Provided that the individual step lengths are set up on the current users correctly, the distance measurement reaches an accuracy of $\pm 5\%$ of the displayed value.

The indication of the calorie consumption is a reference value. Depending on the activity its accuracy can vary. The measurement is reliable at all walking and running movements. Movements with recreational equipment (accessories), such as in-line skates, under heavy loads (carrying) or gym training with weights (for example during body building) can only partially be mapped. The results of the calculations are not very precise because these movements are not fully captured.

4.4 Energy balance

The energy balance will be calculated by using measured and entered values by the device. The AiperMotion calculates as follows:

+ Meals, snacks and drinks (Input)
- Basal metabolic rate
- Measured and entered movement
<hr/>
= Balance in kcal or kJ

The energy balance is an estimation. If the values for nutrition are entered correctly and completely the AiperMotion shows trends that can be used for the observation of your own energy-balance for reducing your weight.

4.5 Data representation and storage

The device is able to record the data of the last 40 days. The last 7 days are depicted in AiperMotion. To be able to watch the entire period you have to use the optional software AiperView. After 6 weeks, the oldest data in the device will be overwritten.

4.6 Tips for advisors

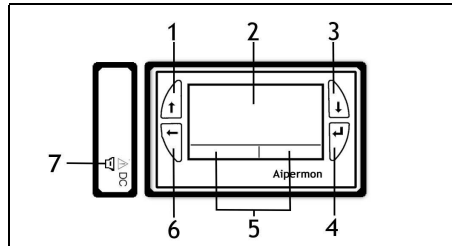
For the supervised use of the AiperMotion a separate coaching program is offered. It can be acquired under the license of Aipermon.

The coaching program includes specific options which the supervisor can adapt individual-related. This enables the supervisor to adapt standardized values on individual goal-values per user like for example a measured individual basal-metabolic-rate, the dietary guidelines and the use of the device for pure measurements without evaluating views.

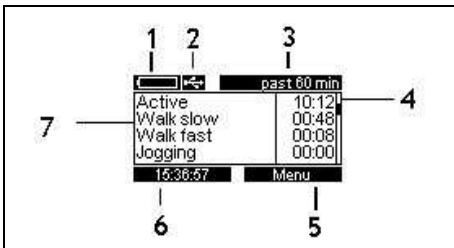
5 Installation and first-time use

5.1 Basic description of keys and functions

No.	Description
1	Navigation button up
2	Display
3	Navigation button down
4	Functional button I
5	Menu Display
6	Functional button II
7	Computer and power connection



Display



No.	Description
1	Battery status
2	Indication of connection to computer or power
3	Menu title
4	The scrollbar shows that there are more options that can be seen by using the navigation buttons
5	Functional button I
6	Functional button II
7	Display

5.2 Charging the battery

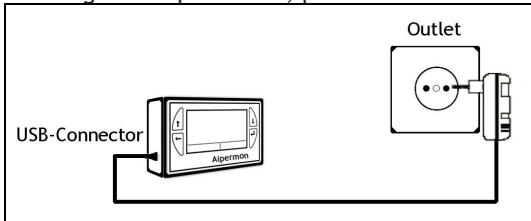
The AiperMotion uses a rechargeable battery. This battery must be fully charged before first-time use so that the battery status display can be calibrated.

On a full charge, the battery life is about 7 full days of use.

Hint:

- The device turns on automatically when plugged into a power source.
- Only use the included original power cord.
- Avoid charging the battery in a high-temperature environment.
- Do not let the AiperMotion charge unsupervised. If the device becomes unusually warm, stop charging immediately and inform the retail agent.
- Do not cover the device during charging so as not to impede air circulation around it.
- Do not place the device on flammable materials during charging.

To charge the AiperMotion, please follow these instructions:



1. Plug the included power cord into the AiperMotion.
2. Plug the Power supply into an outlet. If the AiperMotion was off before charging, it will turn on automatically as soon as connected to a power source.
3. The device is then charging.



A battery symbol in the upper left corner of the display shows the current battery charge status.

If the battery is charging, the battery symbol is changing.

The initial battery charge can take up to 24 hours. Subsequent charges take an average of about 3 hours.

If the battery charge drops below a certain level, a the message “Device is shutting down!” will appear on the display. After this, the AiperMotion will turn off itself. No more data will be recorded.

5.3 Configuration

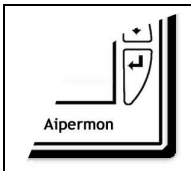
The user is guided through the configuration process upon initial use or by selecting the **Factory Settings** menu.

The user can change the information entered upon initial use at any time by entering the **Settings** menu.

Hints:

- As long as factory settings are set, the calculated values displayed may differ from the user's actual values (calorie consumption, distance covered, etc.). Please enter each value as accurately as possible.
- If any value is unknown, just press **Save**. The correct value can be entered at any time. Any value accidentally entered incorrectly can also be changed upon the completion of the initial setup.

5.3.1 Turning on the device



Press and hold the **Function button 1** for three seconds.

A start screen comes up and various system messages will appear.



For help on turning off the device, please see section 6.5.

5.3.2 Personal data

MENU -> SETTINGS -> PERSONAL DATA

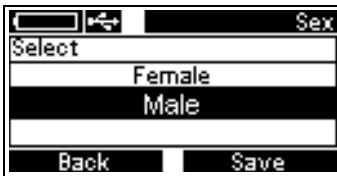
Default values are set in the factory and should be replaced by the correct values for the user upon initial use of the device.

5.3.2.1 Sex

MENU -> SETTINGS -> PERSONAL DATA -> SEX

This information is necessary to calculate your basal metabolic rate and your calories burned.

To set the user's sex, please follow these instructions:



1. Go into **Menu -> Settings -> Personal Data -> Sex** to call up the sex menu, pressing **Select** each time to enter the menu.
2. Use the navigation buttons to select a sex.
3. Save by pressing the **Function button Save**.

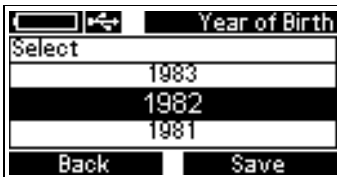
The **Back** button brings the user back to the Main Menu, without storing the settings.

5.3.2.2 Year of birth

MENU -> SETTINGS -> PERSONAL DATA -> YEAR OF BIRTH

This value is necessary for calculation of calories burned. With the birth date your current age is calculated.

To set the year of birth, please follow these instructions:



1. Go into **Menu -> Settings -> Personal Data -> Year of Birth** to call up the year of birth menu, pressing **Select** each time to enter the menu.
2. Go backwards or forwards to the user's year of birth by using the navigation buttons. Pressing and holding a button scrolls through the years quickly.
3. Save by pressing the **Function button Save**.

The **Back** button brings the user back to the Main Menu, without storing the settings.

5.3.2.3 Weight

MENU -> INPUTS -> WEIGHT (or alternatively)

MENU -> SETTINGS -> PERSONAL DATA -> WEIGHT

The weight input is necessary for the calculation of the basal metabolic rate personal meals sizes and calorie consumption. The modification is possible in two ways.

To set the weight, please follow these instructions:



1. Go into *Menu -> Input -> Weight* to call up the weight menu.
2. Increase or decrease each digit by pressing the navigation buttons. Pressing *Function button Next* takes you to the next digit.
3. Save by pressing the *Function button Save*.

If the value should not be saved please wait a moment. The menu disappears automatically.

Hints:

If you reduce your weight you should change this value in the AiperMotion. Otherwise the calculations cannot be up to your actual values.

The device can also store several weight entries per day.

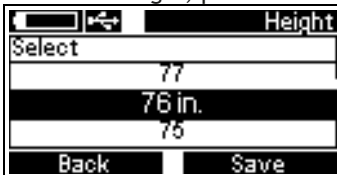
If your weight has changed since the last entry the basal metabolic rate will be adjusted at the following day.

5.3.2.4 Height

MENU -> SETTINGS -> PERSONAL DATA -> HEIGHT

This value is necessary for calculation of calories burned.

To set the height, please follow these instructions:



1. Go into *Menu -> Settings -> Personal Data -> Height* to call up the height menu, pressing *Select* each time to enter the menu.
2. Increase or decrease the value by pressing the navigation buttons. Pressing and holding a button scrolls through the values more quickly.
3. Save by pressing the *Function button Save*.

The *Back* button brings the user back to the Main Menu, without storing the settings.

5.3.2.5 Step length

MENU -> SETTINGS -> PERSONAL DATA -> STEP LENGTH

This value is necessary for calculating the distances.

Step lengths vary depending on the speed of the current movement. The device can differ the frequency of the steps. Individual step lengths can be entered. Because nobody knows his step lengths, the step lengths are assigned to your body height in the initial setup of the device.

If your daily distance calculation does not seem exact enough measure your step lengths and enter your personal values in this field.

Before entering the values for these fields, please do the following to calculate step length:

1. Measure a distance of 328 ft. (100 m).
2. Count the number of steps taken over the distance taken.
3. Divide the distance by the number of steps (for example $328 \text{ ft} = 3936''$ divided by 133 steps = 29,59"). Round to the nearest half inch value. For this example, the value entered into the AiperMotion would be 29,5".

Tip

- On a standard track, one lap is 1312 ft. (400 m) and an indoor track is 656 ft. (200 m) long.

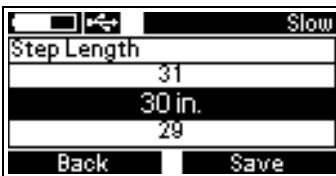
To calculate the step length for "Jogging", the pace should be one that the user can maintain for at least 10 minutes. The table below is meant to guide users who do not do sports.

Hints

- Personal step lengths vary very strong individually. You can enter your individual step lengths to ensure that the daily walked distances are calculated by the best possible approximation.
- The following table shows a rough guideline. These values are automatically entered, based on your body height, as default values.

Body height [cm] / [ft,in]	Walk slow [cm] / [in]	Walk fast [cm] / [in]	Jogging [cm] / [in]
156-165 / 5' - 5'4"	55 \ 21	75 / 29	80 / 31
166-175 / 5'4" - 5'7"	65 \ 25	80 / 31	90 / 35
176-185 / 5'7" - 6"	70 \ 27	85 / 33	100 / 39
186-195 / 6' - 6'4"	75 \ 29	90 / 35	110 / 43
196-205 / 6'4' - 6'8"	80 \ 31	95 / 37	120 / 47

To set the step lengths in the AiperMotion, please follow these instructions:



1. Go into *Menu* -> *Settings* -> *Personal Data* -> *Step Lengths* to call up the step length menu pressing *Select* each time to enter the menu.
2. Increase or decrease the value by pressing the navigation buttons. Pressing and holding a button scrolls through the values more quickly.
3. Save by pressing the *Save* button. After pressing *Save* for one step length, the AiperMotion will continue to the next step length.

The *Back* button brings the user back to the Main Menu, without saving the settings.

5.3.3 Desired values per day

MENU -> SETTINGS -> DESIRED VALUES PER DAY

If you want to increase your activity every day, it makes sense to set personal goals. The device allows you to set your goals in the form of "desired values".

These can be time-setpoints in a class activity, a setpoint for the daily distance or calories you consume by movement.

If you are using the AiperMotion under advice, set your values together with your advisor.

In this menu, you can enter your personal goals (setpoints) for the day. The setpoints will help you to compete yourself on your own targets. They are shown in the "target / is" comparisons.

The setpoints have no influence on the calculation of the activity classes and calories.

Please select a few of the choices for activity goals.

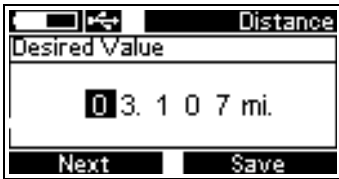
The default factory values give an indication on the right amount of activity healthy people should have.

	Default values
Distance	5000 m / 3 mi
Mot. Calories	600 kcal / 2512 kJ
Active	1:30 hh:mm
Walk slow	1:30 hh:mm
Walk fast	0:30 hh:mm
Jogging	0:00 hh:mm

Hint:

- If the user cannot do sport-like activity due to health reasons, the "Jogging" desired value should be ignored.

To set personal goal values, please follow these instructions:



1. Go into *Menu* -> *Settings* -> *Desired Values per Day* to call up the desired values menu, pressing *Select* each time to enter the menu.
2. Use the navigation buttons to select a menu option (Distance, Mot. Calories, Active, Walk slow, Walk fast or Jogging).
3. Press *Select* to choose an option.
4. Increase or decrease the value by pressing the navigation buttons. The *Next* button moves to the next entry field.
5. Save by pressing the *Save* button.

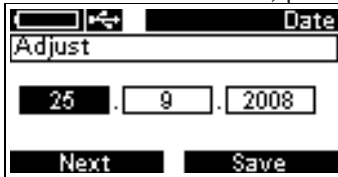
If you don't want to change the value, wait until the menu disappears automatically. The changes won't be saved.

5.3.4 Date and time

MENU -> SETTINGS -> DATE & TIME

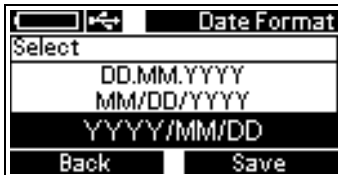
This menu allows the user to set the date, date format, time and time format for the AiperMotion.

To set the date and time, please follow these instructions:



1. Go into *Menu -> Settings -> Date & Time* to call the date and time menu, pressing *Select* each time to enter the menu.
2. Use the navigation buttons to select a menu option (Set Date or Set Time).
3. Press *Select* to choose an option.
4. Increase or decrease the value by pressing the navigation buttons. The *Next* button moves to the next entry field.
5. Save by pressing the *Save* button.

To set the date and time format, please follow these instructions:



1. Go into *Menu -> Settings -> Date & Time* to call up the date and time menu, pressing *Select* each time to enter the menu.
2. Use the navigation buttons to select a menu option (Date Format or Time Format).
3. Press *Select* to choose an option.
4. Choose a format for the date and the time using the navigation buttons.
5. Save by pressing the *Save* button.

The *Back* button brings the user back to the Main Menu, without storing the settings.

5.3.5 Language

MENU -> SETTINGS -> LANGUAGE

To change the language in the menu, please follow these instructions:



1. Go into **Menu -> Settings -> Language** to call up the language menu, pressing **Select** each time to enter the menu.
2. Use the navigation buttons to select the desired language.
3. Save by pressing the **Save** button.

The **Back** button brings the user back to the Main Menu, without storing the settings.

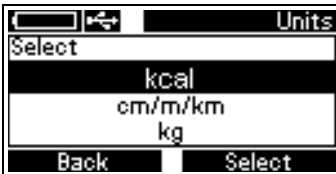
5.3.6 Units

MENU -> SETTINGS -> UNITS

You can choose between different units and formats for the display of values:

- kcal / kJ
- cm/m/km or in./ft./mi.
- kg or lb.

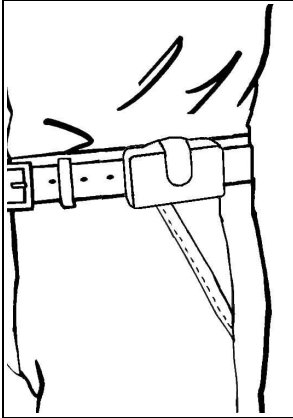
To change the shown units, please follow these instructions:



1. Go to **Menu -> Settings -> Units** to call up the units menu, pressing **Select** each time to enter the menu.
2. Use the navigation-buttons to select the units you want to change and press **Select**.
3. The used unit is shown now.
4. If all the units that you want to use are shown on the display, leave this menu with the **Back** button.

6 Using the AiperMotion 440 PC

6.1 Wearing the device



The AiperMotion is worn on the left hip inside the included case. The screen should face away from the body.

To save power, the display backlight turns off after 30 seconds without any key pressing.

If the AiperMotion is not moved within the last 10 minutes, the AiperMotion stops the measurement and the display turns off. These times are logged as not worn.

Stronger movement will turn the display on again.

6.2 Menu Inputs

MENU -> INPUTS

The menu "Inputs" includes all entry points. These include meals/drinks, your actual weight and exercises that you want to enter later or that are not measurable by the device.

6.2.1 Meal/Drink

Here you can do the documentation of your food intake. We recommend that each entry is done after the meal immediately. Each entry is stored with the actual date and time and is written in a list in background. This list will be transmitted to the evaluation software AiperView during data synchronisation. It can be modified in the software subsequently.

6.2.1.1 Exact value

MENU -> INPUTS -> MEAL/DRINK -> EXACT VALUE

On many packaged foods the exact energy content in joules and calories is printed today. The values to calculate the energy content of all ingredients of a meal can also be found in calorie-guides. We recommend to enter the exact values as often as possible because that would increase the accuracy of the estimation of the energy-balance.

To enter a precise value, proceed as follows:



1. Go to *Menu* -> *Inputs* -> *Exact value* to call up the exact values menu, pressing *Select* each time to go into the menu.
2. Increase or decrease the value by pressing the navigation buttons. The *Next* button moves to the next entry field.
3. Save by pressing the *Save* button. The input is taken into account in the energy balance immediately.

ately.

If you don't want to change the value, wait until the menu disappears automatically. The changes won't be saved.

Hint:

A list of your last 4 entries can be found if you navigate to the penultimate view in
MENU -> ANALYSES -> CURRENT

6.2.1.2 Entries according to scheme

The calculation of the amount of energy of every meal is based on your entered personal data. Therefore, the "Warm Meal, Normal" for a woman weighing 110 lbs (50 kg) is less calculated as the "Warm Meal, Normal" of a man weighing 176 lbs (80 kg). If your weight changes, the energy calculations of your meals are also adjusted.

Drinks are often sold and drunk in normalised packagings. Therefore, two typical volume ranges are deposited in the scheme. All sugar containing and no-diet drinks should be entered. Exceptions are water, tea, coffee with no additives and low-calorie drinks that are often assigned as "light" or "zero". 1-2 cups of coffee or tea with milk are covered by the food-inputs. The energy content of no-diet-drinks is highly variable. Therefore we recommend that you should enter the precise value from the calories table on the packaging of your favourite no-diet drink.

"Treats" are understood as all the food that should be avoided to eat during a diet period. Such foods are now often delivered in packages. Therefore, they are deposited in the scheme with normalised values without regards to the users personal data.

Hint:

- The energy content of your food is fluctuating from day to day. For that reason the consumed calories will sometimes be more or less than the calculated value. On average per week the calculated value is a good approximation if you have assessed the size of your meals correctly.
- „flexible“ (table below) means, that the value is calculated relative to your actually stored weight.

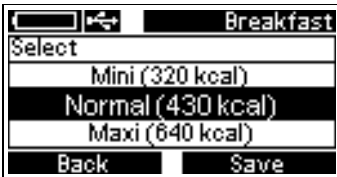
The following table gives you clues which kind of food you should enter:

		kcal / kJ	Explanation
Breakfast	Mini	flexible	One piece of breakfast, typical, e.g. One bread roll, a dish of cereals and a cup of coffee.
	Normal	flexible	Two pieces of breakfast, typical, e.g. Two bagels or croissants and a cup of coffee.
	Maxi	flexible	Three pieces of breakfast typical, e.g. one bagel, one croissant, one egg and a cup of coffee.
Snack	Mini	flexible	One piece of fruits
	Normal	flexible	One small sandwich
Cold meal (for lunch or at the evening, second largest meal of the day)"	Mini	flexible	One sandwich
	Normal	flexible	Two sandwiches
	Maxi	flexible	More than two sandwiches
Warm meal (mostly warm, largest meal of the day)"	Mini	flexible	One plate e.g. 1 plate including one side order e.g. rice, noodles, potatoes
	Normal	flexible	Two components, e.g. one plate + additional salad or one pizza.
	Maxi	flexible	Three components, or a very heavy meal
	XL	flexible	A buffet or BBQ
Treat	Mini	150/628	4 pieces. chocolate, 1 scoop of ice cream, some snacks, a small candy-bar, 3 pieces of Candy
	Normal	400/1675	1 piece of cake, 1 big candy-bar, 3 scoops of ice-

		kcal / kJ	Explanation
			cream, some more snacks
	Maxi	800/3349	Everything more than normal treats.
Drink			All drinks containing alcohol and /or sugar, especially Cola, Milk - and yoghurt-drinks, Lemonades, Juices, mixed drinks. (Not to enter: Water, Coffee, Tea, Drinks without calories)
	Mini	125/524	6-10 fl. oz. (0,2-0,3 liters)
	Maxi	250/1047	13-20 fl. oz. (0,5-0,6 liters)

MENU -> INPUTS -> MEAL/DRINK

To enter the pre-defined meals proceed like described below:



1. Go to *Menu -> Inputs -> Meal/Drink*.
2. Use the arrow keys to go to the meal you want to enter and press *Save*.
3. Choose between “Mini”, “Normal” and “Maxi” and Save by pressing the *Function button Save* button.

ATTENTION: The amount of energy per meal is calculated according to your personal information (gender, age, height, weight). For a 110 lbs (50 kg) woman it is less than for a 220 lbs (100 kg) man.

4. The *Back* button brings the user back to the Main Menu.

The main meal can also be entered as extra large (XL). To reach this option use the arrow keys.

Hint:

- A list of your last 4 entries can be found in MENU -> ANALYSES -> CURRENT if you navigate to the last view with the arrow buttons.

6.2.2 Movement (manual Input)

In this menu you can enter activities manually.

It was created to offer the following opportunities:

- If you can't use the device during sports you're able to append your energy consumption after the exercise.
- For certain sports the AiperMotion cannot be used (e.g. swimming).
- For sports with intense arm usage (such as rowing, tennis, weight training) the energy consumption is underestimated.
- During sports with the danger of falling (e.g. ball games) the device shouldn't be used to avoid injury and / or damage of the device.
- There are activities that cannot be measured because of the technology or respectively the wearing-position. These include in particular movements with tools such as Cycling.
- Even activities with endurance training devices such as steppers, crosstrainers and ergometers are not fully measurable by the AiperMotion because of the adjustable resistance levels of these tools.

The additional input can be done as follows:

6.2.2.1 Input of Exercises with calculation of kcal / kJ

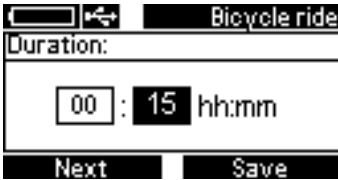
For the most common sports a calculation scheme is deposited. The consumption is always been calculated based on the entered body weight.

To enter the extra Exercise proceed like described below:

Menu -> Inputs -> Exercise



1. Go into Menu -> Settings -> Exercise
2. Press **Select** to get the list of exercises.
3. Use the arrow keys to select the exercise you want to enter and press **Select**.
4. Choose the intensity of your activities out of „Light“, „Moderate“ or „Vigorous“ and press the **Select** button.
5. In the screen „Duration“ you have to enter the time you spent on this exercise. Increase or decrease the value by pressing the navigation buttons. Pressing and holding a button scrolls through the values more quickly.



- Save by pressing the **Function button Save**. The input is included in the energy balance immediately.

Hint:

- If you don't want to change the value, wait until the menu disappears automatically. The changes won't be saved.

6.2.2.2 Input of exercises: Exact value

MENU -> INPUTS -> EXERCISE -> EXACT VALUE

If you want to append activities or exercises simply use this menu to enter how many kcal / kJ you have consumed with exercises.

For the calculation of the sports that are not depicted in the scheme, we recommend the use of Internet lists.

6.2.2.3 Input of exercises: Bicycle ride

MENU -> INPUTS -> EXERCISE -> BICYCLE RIDE

If you wear the device at the hip while cycling the calories may not be fully measured. Depending on the intensity of your cycling, approximately 25-30% of the consumed calories will be fully measured. To calculate the calories while cycling improved formulas are used to add the consumed calories which were not measured. Therefore enter the length of the tour after cycling.

- Light bicycling: In average 9 - 11 mph (15-19 km/h)
- Moderate bicycling: In average 11 - 13 mph (11-22 km/h)
- Vigorous Bicycling: In average more than 13 mph (22 km/h)

Attention:

- If you didn't wear the device while cycling enter the next intensity level. If you were under 19km/h (11mph) use "Moderate" and "Vigorous" if your speed was in between 19.1km/h to 22km/h (11mph - 13mph).

The displayed distance when cycling is incorrect because a pedal-rotation is detected as a step.

Cycling is sorted in the activity classes "Walk Slow" or "Walk Fast" by the device, depending on how fast you drive.

Hint:

- A list of your last 4 entries can be found in the MENU -> EVALUATIONS -> CURRENT if you navigate with the arrow buttons to the last view.
- Entered activities are differently coloured in the software AiperView and can be changed there retrospectively.

6.2.2.4 Input of weight training

MENU -> INPUTS -> EXERCISE -> WEIGHT TRAINING

During weight training certain muscles are used in a specific way with adjustable load. The AiperMotion worn on the hip is not able to measure that activity well enough. Do not wear the device during workout. Just enter the duration of your weight training afterwards. Enter the intensity and minutes you spent for training.

- Light weight training: invigoration training
- Moderate weight training: heavy dumb-bell training
- Vigorous weight training: intensive training with repetitions

6.2.2.5 Input of swimming

MENU -> INPUTS -> EXERCISE -> SWIMMING

Enter the amount of swimming time as described for weight training. Please consider the following list to enter the right intensity.

- Light swimming = simple lane swimming as leisure activity
- Moderate swimming = swimming with increased effort
- Vigorous swimming = swim training

6.2.2.6 Input of aerobic

MENU -> INPUTS -> EXERCISE -> AEROBIC

The AiperMotion can be worn during your aerobic workout. If you do not wear the device enter the energy consumption as described for weight training.

- Light Aerobic = aerobic without reaching limits
- Moderate Aerobic= interval training
- Vigorous Aerobic = Power training with reaching limits

6.2.3 Input of actual body-weight

Many calculations of the AiperMotion are based on the current value of the user's weight. That's why it makes sense that the actual weight is always documented in the device. The values are stored separately and transferred to the software AiperView during synchronisation.

MENU -> INPUTS -> WEIGHT

To set the weight, please follow these instructions:



1. Go into *Menu -> Inputs -> Weight*.
2. To call up the weight menu, press *Select* .
3. Press *Next* to switch between the digits
4. Increase or decrease the value of each digit by pressing the navigation buttons. Pressing and holding a button scrolls through the values more quickly.
5. Save by pressing the *Function button Save*.

If you don't want to change the value, wait until the menu disappears automatically. The changes won't be saved.

Hints:

- Adjust your weight regularly 1-2 times per week if changes can be recognized. Otherwise the calculations of the AiperMotion are not equal to your actual values.
- Your weight entries will be transferred to the software AiperView where you can observe your changes.
- The device is able to store more than one weight entry per day.
- If your weight has changed since the last entry, the basal metabolic rate will be adjusted at the following day.

6.3 Analyses Menu

MENU -> ANALYSES

The AiperMotion calculates and displays various parameters such as statistics. AiperMotion is divided into three main evaluations and a number of other evaluations which give you a lot of information about your activities.

6.3.1 The three main evaluations in section "Today"

MENU -> ANALYSES -> TODAY

The menu "Today" contains three main evaluations that can help you in bringing your diet and your exercise in the desired balance:

- Analysis of the energy balance
- Overall evaluations of activities
- Analysis of all activity-classes

6.3.1.1 Energy balance

MENU -> ANALYSES -> TODAY

The analysis of energy-balance is shown in the first view of "Today".

Today	
Meal / Drink	+1120
Basal metabolism	-1485
Exercise	-476
Balance (kcal)	-841
15:30:56	Menu

You can reach them by scrolling with the arrow keys. It is precisely calculated to-the-minute. Each entered food intake is shown here.

The basal metabolic rate is calculated once each day (shortly after the start of the new day) on the basis of currently available values. When weight (current) and age (once a year at the beginning of the year) has changed also the calculated basal metabolic rate will be

changed. In the line "Exercise" both are taken into account, measured and entered activities.

The energy balance is balanced if the burned calories equal the consumed calories. Because of the potential inaccuracy of all factors the displayed value is always an estimation. Your energy balance will probably be stable, if your calorie consumption remains 200 to 300 kcal (838-1256 kJ) on average per day plus or minus.

The value in the line "Balance" is a number that should be interpreted as follows:

If you are often and clearly in the negative range (500-700 kcal or 2100 - 3300 kJ recommended), you tend to reduce your weight if all entries are made carefully and completely.

Hints:

- If you want to reduce your weight try to stay in the minus range of your energy-balance for 500-700 kcal (2100 - 3300 kJ) average per day. You can reach this with more activity and a moderate reduction of food intake.
- Don't decrease your calorie consumption below your basal metabolic rate. Otherwise your body will switch to an "emergency mode" with a reduced basal metabolic rate.

6.3.1.2 Evaluation Movement

MENU -> ANALYSES -> TODAY

The analyses of the activity classes are shown in the second view of "Today". You can reach them by scrolling with the arrow keys. It is precisely calculated to-the-minute.

In the line "Moved" the sum of all your activity times of the current day is shown. The "Target" is derived from the sum of all your desired activity-times you set up in the options.

		Today	
	Targ.	Is	
Moved	03:30	01:47	
mi.	3.107	1.156	
kcal	500	477	
15:33:10		Menu	

The line "mi." or "km" summarizes your activity in the classes "Walk Slow", "Walk Fast" and "Jogging" to a distance value. The line "kcal" or "kJ" refers to all kcal / kJ, which the device has already recorded for your activities and your manually entered activities.

Hints:

- If you want to move yourself more often, try to increase your total time of activity per day by walking frequently. Short ways are logged by the AiperMotion, too.
- If you want to reduce your weight, try to burn more calories per day by increasing your regular daily activities. To exhaust 100-200 kcal (400-800 kJ) per day more is quite easy to reach.

6.3.1.3 Evaluation by activity type

MENU -> ANALYSES -> TODAY

		Today	
Active	01:30	01:18	
Slow	01:30	00:18	
Fast	00:30	00:10	
Jogging	00:00	00:00	
15:33:35		Menu	

The analyses of the activity classes are shown in the third view -> Today. You can reach them by scrolling with the arrow keys. It is precisely calculated to-the-minute.

In the second column you see the desired values per day and the activity class entered to the device. If you didn't set these values to your individual goals the default factory values will appear. The already measured movements are shown in the third column.

Entered movements are not displayed here.

Hints:

- If you want to move yourself more often try to
- reach the class „Fast“ more often
 - increase the „Active“- and „Slow“- times per day.

6.3.2 The seven-day history of the major evaluations

MENU -> ANALYSES

The device displays the three main analyses for 7 days. The Data is stored up to 40 days in the device and can be transferred to the optional software AiperView.

6.3.3 Analysis views: Current

MENU -> ANALYSES -> CURRENT

To study your own activity AiperMotion has an extra analyses The menu option **Current** shows analyses up to the last 4 hours.

To display the various analyses, please follow these instructions:

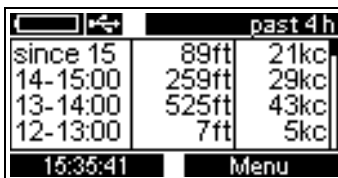


1. Go into **Menu -> Evaluations -> Current** to open the current data screen pressing **Select** each time to enter the menu.
2. Use the navigation buttons to see each analysis.

The **Back** button brings the user back to the Main Menu.

The different analyses views are explained below:

6.3.3.1 Analysis view: past 4 hours



This view shows the distance covered and the calories burned over the last 4 hours.

The **Back** button brings the user back to the Main Menu.

Hints:

- When the time is not matching with the actual time, adjust the clock of the device
- If the shown covered distance occurs to be too short or too long check the settings of your step lengths

6.3.3.2 Analysis View: past 60 minutes



past 60 min	
Active	10:12
Walk slow	00:48
Walk fast	00:08
Jogging	00:00
15:36:57	Menu

In this menu, the first view shows an overview of the activity types over the past 60 minutes. The values are displayed in minutes and seconds.

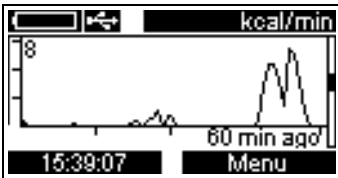
The menu shows only the values where activity is identified. If the user was passive within the last 60 minutes the sum of the values will be below 60 minutes.

The *Back* button brings the user back to the Main Menu.

Example:

The user has worked in the office during the last 60 minutes. He stood up a couple of times, went to the printer and visited a colleague. For one hour in the office he moved 11 minutes and 8 seconds which is quite a lot. Without his activity the values would have remained almost at zero. He burned between 20 and 30 calories by moving.

6.3.3.3 Analysis View: kcal/min

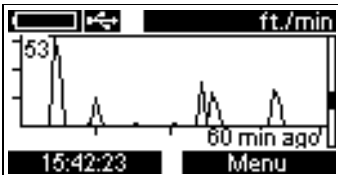


This graph shows the calories per minute burned over the last 60 minutes. The number in the upper left corner shows the greatest calorie consumption value per minute. The graph starts with the actual time.

Example :

The user walked from the bus-stop to her job during the last 60 minutes. Because she is a little late, she walked this way very quickly. That brings 7-8 kcal per minute on her movement account

6.3.3.4 Analysis View: distance/min



This graph shows the distance per minute covered over the last 60 minutes. The number in the upper left corner shows the greatest distance per minute. The graph starts with the actual time.

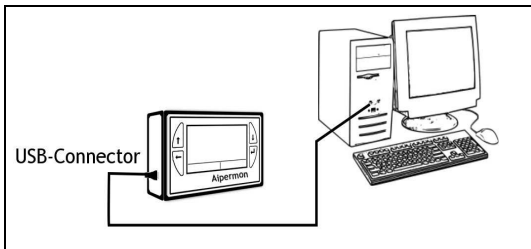
Example:

The user walked the short way to the canteen during the last 60 Minutes. He tested, how many feet per minute he can walk when he goes very quickly. He reached 53 feet per minute. In the activity class assignment, he came from "Walk Slow" to "Walk Fast" for 2 minutes on the way to the canteen.

6.4 Connecting to a computer

The optional software AiperView allows the user to connect the AiperMotion to a computer in order to transfer, analyse and save measurements.

To transfer measurements to a computer, please follow these instructions:



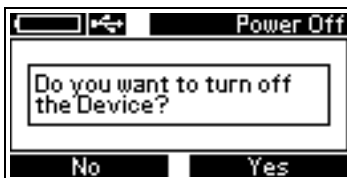
1. Connect the USB cable to the AiperMotion.
2. Plug the other end of the USB cable into an empty USB port on the computer.
3. Start the AiperView software

The AiperMotion must be registered in the AiperView software in order to continue. Please see the user manual for the AiperView software for using the program and synchronizing the AiperMotion with the computer.

6.5 Turning off the device

MENU -> SYSTEM -> POWER OFF

To turn off the AiperMotion, please follow these instructions:



1. Go into *Menu -> System -> Power Off* pressing *Select* each time to enter the menu.
2. Press *Yes* to confirm.

The message “Device is shutting down!” appears.

To turn the AiperMotion on again, press the *Function button 1* for about 3 seconds.

Hint:

If the AiperMotion is not moved within the last 10 minutes, the AiperMotion stops the measurement and the display turns off. These times are logged as not worn.

7 Maintenance

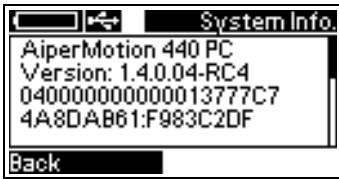
In case of a defect of the AiperMotion, please contact the retail agent. Be aware that any repair or firmware update of the AiperMotion will result in the deletion of all data.

7.1 System information

MENU -> SYSTEM -> SYSTEM INFORMATION

This menu shows technical information about the AiperMotion as well as the serial number.

To view the system information, please follow these instructions:



1. Go into **Menu -> System -> System Information** to call up the system information, pressing **Select** each time to enter the menu.
2. Use the navigation buttons to see more information.

The **Back** button brings the user back to the Main Menu.

7.2 System uptime

MENU -> SYSTEM -> SYSTEM UPTIME

To view the system runtime, please follow these instructions:



1. Go into **Menu -> System -> System uptime** to call up the system uptime, pressing **Select** each time to enter the menu.
1. Use the navigation buttons to see more information.

The **Back** button brings the user back to the Main Menu.

7.3 Factory settings

MENU -> SYSTEM -> FACTORY SETTINGS

Hint:

- Please use this function only when giving the device to a new user.

To reset the AiperMotion to the factory settings and to delete all personal data, please follow these instructions:



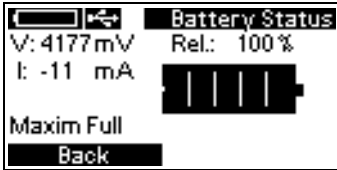
1. Go into *Menu -> System -> Factory Settings* pressing *Select* each time to enter the menu.
2. The message “Do you want to delete your personal Settings?” appears. Press *Yes* to confirm. If the data should not be deleted, press *No*.

The message “Device is shutting down!” appears briefly. After this, the device turns off.

7.4 Battery status

MENU -> SYSTEM -> BATTERY STATUS

To view the battery status, please follow these instructions:



1. Go into *Menu -> System -> Battery Status* pressing *Select* each time to enter the menu.
2. The *Back* button brings the user back to the Main Menu.

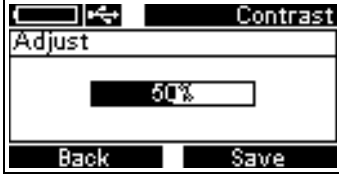
The *Back* button brings the user back to the Main Menu.

V	Voltage
I	Current (>0: Battery is charging; <0: Battery is discharging)
Rel.	Actual capacity in %
Maxim Full	The battery is completely charged
Learning...	Calculating the capacity of the battery
Maxim Active	Control of charging / discharging.

7.5 Contrast

MENU -> SYSTEM -> CONTRAST

To set the contrast of the display, please follow these instructions:



1. Go into *Menu -> System -> LCD Contrast* to call up the LCD Contrast menu pressing *Select* each time to enter the menu.
2. Use the navigation buttons to raise or lower the contrast.
3. Save by pressing the *Save* button.

The *Back* button brings the user back to the Main Menu, without storing the settings.

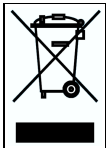
7.6 Cleaning

To clean the AiperMotion, please follow these instructions:

1. Disconnect any cables and the power cord from the AiperMotion.
2. Turn off the AiperMotion.

Use a soft, slightly damp, non-piling cloth. Take care not to let any moisture get into the device. Do not use household products such as glass cleaner, surface cleaner, solvents, alcohol or ammonia-based products or scouring agents to clean the device. These can damage the AiperMotion.

7.7 Device disposal



Dispose of the device following national specifications for disposal of electronic devices.






The European Directive 2002/96/EC (WEEE) requires that old electronics shall be disposed of separately from normal household garbage for optimal recycling and reuse of the material inside the devices and to reduce the negative effects on health and the environment. The crossed-out garbage can symbol serves as a reminder of the responsibility to dispose of the device correctly. For more detailed information regarding the available disposal systems please consult the local recycling center or the retailer from whom the device was acquired.

8 Specifications

Measurements	75 x 48 x 20 mm
Weight	72 g
Display	High-resolution LCD matrix display with a resolution of 128 x 64 pixels Size: 50 x 30 mm (3 x 1,2 in)
Sensor	Three-dimensional digital acceleration sensor
Disc capacity	256 KB internal flash drive for 6 weeks of recorded data
Battery	Lithium-ion battery, 700 mAh, 3.7 V Run time approx. 7 days of continuous use. The built-in battery cannot be replaced by the user. The battery has a life of 300 charge cycles.
Power use	5 V/ 500 mA, 2.5 W
Conditions for use	-10 °C to 40 °C; 14 °F to 104 °F 700 hPa to 1060 hPa 10% - 90% relative humidity
Conditions for storage / transport	-20 °C to 40 °C; -4 °F to 104 °F 700 hPa to 1060 hPa 10% - 90% relative humidity
IP-Rating	IP-30: Resistant to solid bodies with a diameter of ≥ 2.5 mm (0,1 in); not water resistant.
Accuracy	Classification of activity type: 95% Distance measurement: $\pm 5\%$ of value displayed

8.1 Symbols

The following symbols appear on the AiperMotion

Symbol	Description
	Manufacturer
SN	Serial number
REF	Article number and product name
	Year of production
	Consult owners manual
	Device falls into protection class II, protective isolation
	Do not dispose of in household garbage

Declaration of conformity



The AiperMotion 440 PC complies to the Council Directive 2004/108/EG of electromagnetic tolerance

9 Accessories

	Article-No.
Standard accessories:	
AiperMotion 440 PC Set containing:	1528

- AiperMotion 440 PC
 - User manual AiperMotion 440 PC
- Software AiperView 440
 - User manual AiperView 440
- Power-supply
- USB-Cable
- Case

10 Warranty information

The warranty is valid for two years from the date of purchase. The warranty only covers damages resulting from material or production defects.

11 Used Licenses

The register of used licenses and complete terms of licenses can be found on the CD-Rom in the root directory.

Manufacturer

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