

SK

Training and operating instructions

Manuel d'entraînement et d'utilisation

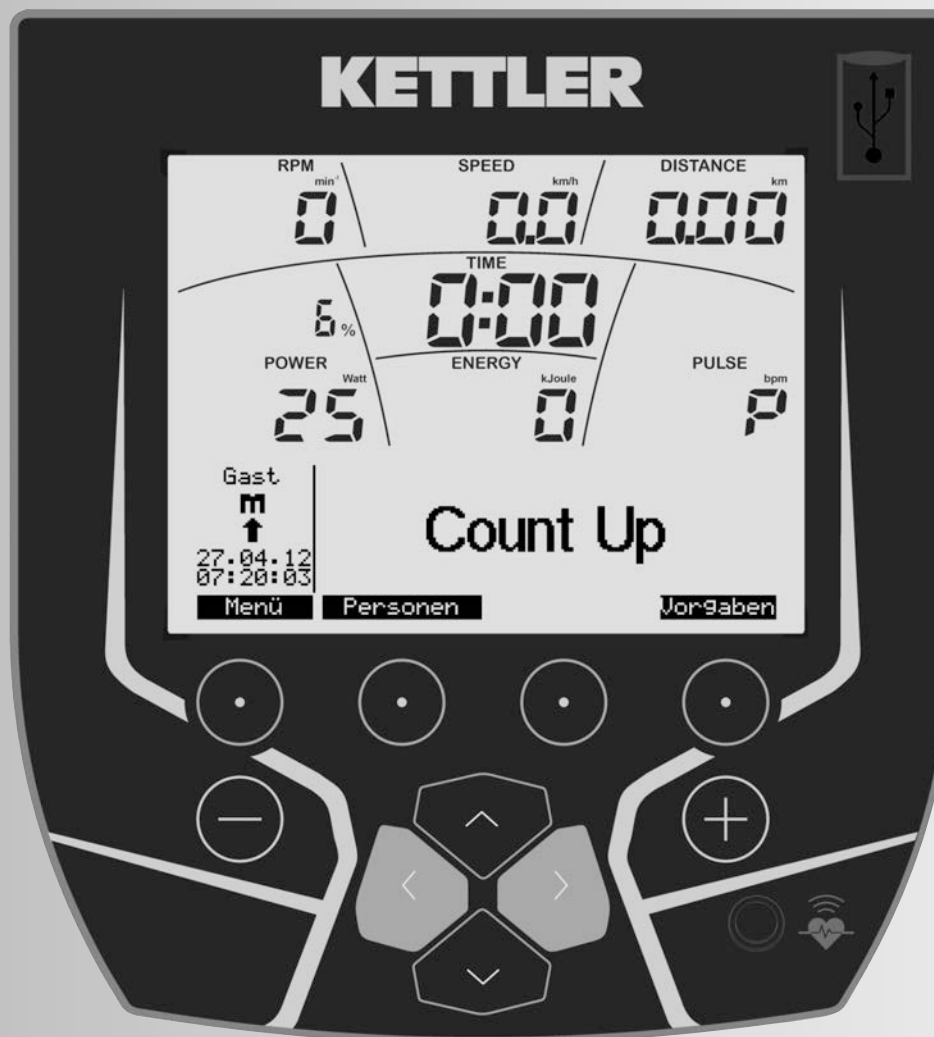
Trainings- en bedieningshandleiding

Training and operating instructions

Istruzioni per l'allenamento e per l'uso

Instrukcja treningu i obsługi

Návod k obsluze a tréninku



D

GB

F

NL

E

I

PL

CZ



Training and operating instructions

english

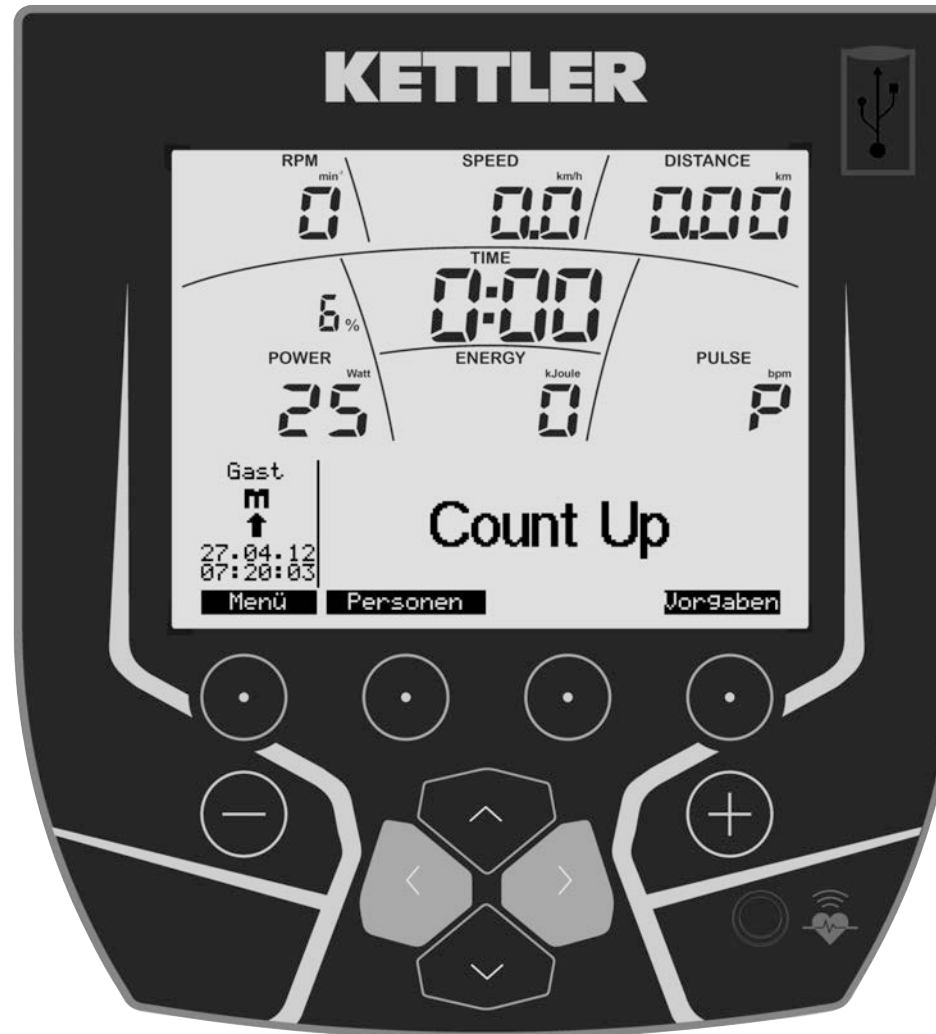


Table of Contents

Safety instructions	2
• Service	2
• Your safety	2
Short description	3
• Display area / display	3
• Buttons and button functions	3
• Resetting the Display	3
• Type of pulse measurement	3
• USB device interfaces	3
• Selecting Language	3
• Display Settings	3
• Values and Symbols Displayed	4
Quick start (to become familiar)	4
• Training stand-by	4
• Beginning of training	4
• Interruption of training	4
• Standby mode	4
Main Menu	5
• Required input	5
Menu → Users	5
• Select person / USB flash drive	5
• Entering User Data	5
• Sample Data "Thomas"	5
Menu → Programme	5
• Performance (manual)	6
• Recording of training (Recorded Sessions)	6
• Performance (preset) Profile	6
• Performance (individual)	6
• HRC (manual)	6
• HRC (preset) Profile 6	6
• HRC (individual)	6
• IPN test	6
• Coaching programme	6

Training	7
Select a training programme	7
• Performance (manual) "Count Down"	7
Current default settings	7
Training stand-by	7
• Performance (fixed)	7
Current default settings	7
Mode: Time or distance	8
Training stand-by	8
• Manual pulse input "HRC Count Down"	8
Current default settings	8
Training stand-by	8
• Pulse-profile HRC (fixed) HRC-Profil 1	8
Current default settings	8
Training stand-by	8
Training	9
• Display change (multi-purpose display)	9
Training functions	9
• Revolutions per minute (dependent / independent)	9
• Monitoring of rotation speed/performance	9
• Pulse monitoring	10
Target pulse	10
Maximum pulse	10
• Heart rate light (traffic light function)	10
• (recovery pulse measuring)	10
• Interruption or end of training	10
• Resume training	11
Individual training profiles Editing	11
• Performance (individual)	11
• HRC (individual)	11
Main menu → Default Settings	12
• 1. Display & functions	12

• 2. Training values	13
• 3. Pulse default settings	13
Main menu → Settings	14
• 1. Units	14
• 2. Display	14
• 3. Time and date	14
• 4. Stand-by	15
• 5. Factory Settings	15
• 6. Firmware-Update	15
General information	15
• System beeps	15
• Recovery	15
• Switching time / distance	15
• Profile display during training	15
• Operation dependent on rotation speed	15
• Operation independent from rotation speed	15
• Calculating the average value	15
• Information on pulse measuring	15
with ear clip	15
with chest strap	16
• Malfunction of the training computer	16
• Information on the interface	16
Training instructions	16
• Endurance training	16
• Stress intensity	16
• Amount of stress	16
• Warm-Up	16
• Cool-Down	16
Glossary	16

Safety instructions

Please observe the following instructions for your own safety:

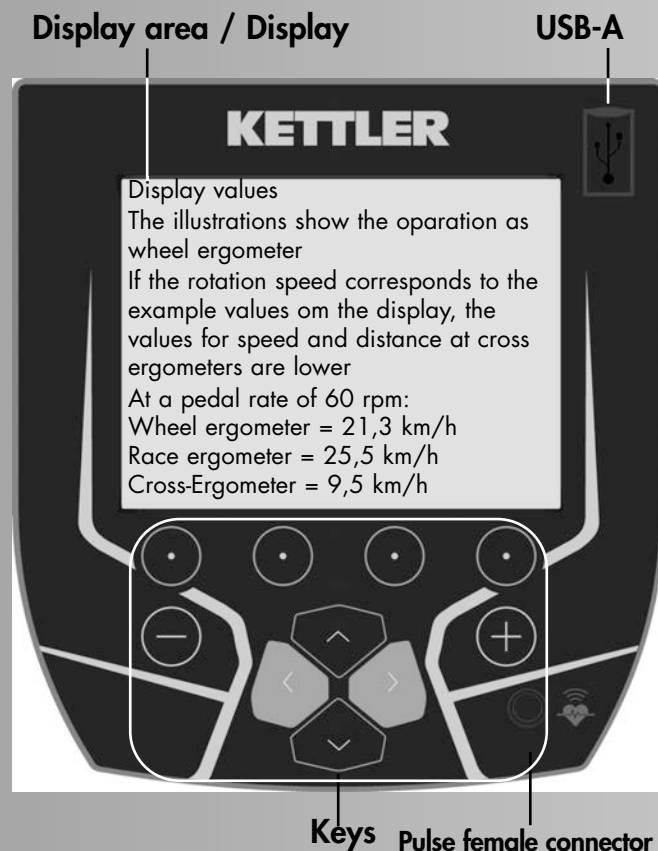
- The training appliance must be erected on a suitable and stable surface.
- Before putting into operation for the first time and after the appliance has been in operation for approximately 6 days, all connections must be checked to ensure a secure fit.
- In order to prevent injuries caused by incorrect loading or overloading, the training appliance may only be used as per instructions.
- A permanent erection of the appliance in damp rooms is not recommended since rust will form.
- Conduct regular checks to ensure that the functional efficiency and general overall condition of the training appliance are as they should be.
- The Operator's responsibilities also include technical safety checks and must be conducted at regular intervals and with the required thoroughness and precision.
- Defective or damaged components must be replaced immediately.
- Use only original KETTLER spare parts
- The appliance must not be used until repair work has been completed.
- The level of safety of the appliance can only be maintained if it is checked at regular intervals for damage and wear-and-tear.

For your safety:

- **Before taking up training, consult your GP to ensure that your state of health is such that the appliance is a suitable form of training for you. Your own personal training programme should be based on the medical findings. Incorrect or excessive training can damage your health.**

Short description

The electronic unit consists of function keys and a display.

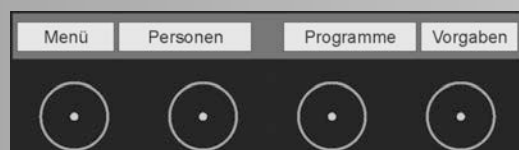


Turning the device ON and OFF

Start the display in standby mode with the **navigation button "up"**.

Soft buttons

These 4 buttons trigger features which will be shown in the display above, e.g. menu, persons ...



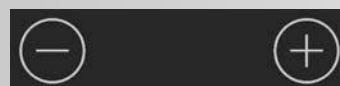
Navigation keys

Use the navigation keys to select menu features or menu entry fields.



Enter keys minus - / plus +

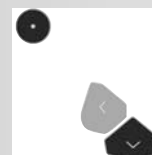
By means of these keys, you can alter values, adjust the stress values for training and shift profiles.



- "Plus" increases the values or alters settings
- "Minus" reduces the values or alters settings
- Press "Plus" or "Minus" for a **longer** period of time > quick modification
- Press "Plus" and "Minus" at the **same time**:
 - Stress skips to **smallest performance default setting Off**
 - Programmes skips to
 - Value input skips to

Resetting the Display (Software-Reset)

Pressing the three keys at the same time, will restart the equipment.



Type of pulse measurement

The pulse measurement can be carried out in two ways:

1. Ear clip
The plug is put into the pulse female connector;



2. built-in receiver and Polar chest strap T34 (please refer to the appropriate instructions)

USB type A connector

Connector for storage media. The storage requires a FAT32 format.

USB type B connector

Connector to the pc is located at the rear side of the display.



Selecting Language

When switched on for the first time, the language menu.



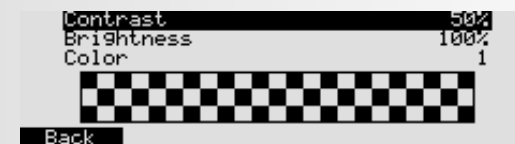
Use navigation keys **"Up"** and **"Down"** to select language.

Press **"Select"** to accept language selection and to open the **"Display"** menu.

Press **"Cancel"** to get back to the main menu. Settings will not be saved, display will be shown when switched on again.

Display Settings

After having set the language, the menu for setting the brightness, the contrast and the background colour of the display appears.



Press **"Back"** to get back to the main menu. The settings will be saved.

Press **"Cancel"** to get back to the main menu instantly. Settings will not be saved, display will be shown when switched on again.

Contrast and Brightness

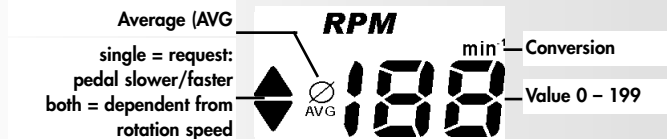
When the optimal contrast is set, there will be no heavy shades.

Colour

Here you can change the background colour of the display

Training and operating instructions

Pedal rate



Speed



Distance



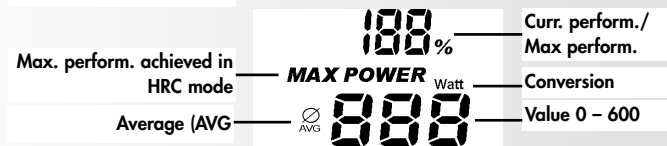
Time



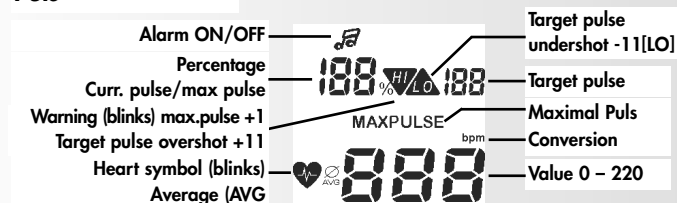
Energy Consumption



Performance



Puls



Quick Start

(Introduction, no settings)

After turning ON the device via the mains switch or pressing navigation key "Up", all segments are shown and the total distance and time are displayed at the bottom.



2"

8"

Readiness for training

After a few seconds, the "Count Up" programme is displayed. The person "Guest" is displayed



Start of training

When pedalling, the values for the pedalling frequency,

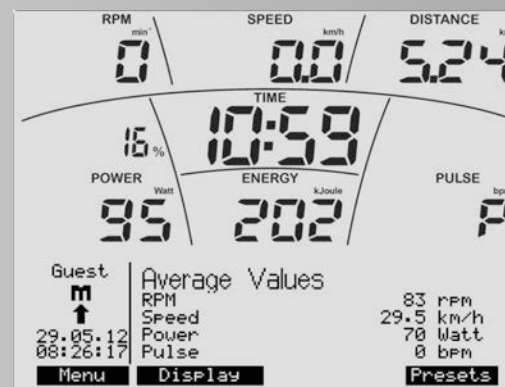


speed, distance, training time, and energy consumption are incremented. Pulse (if measurement of pulse is enabled) shows the current value. The % information above **POWER** shows the performance-maximum performance- relation (adjustable by the trainee).

How to change the performance during the training:
Press "**Plus**" to increase the performance in steps of 5.
Press "**Minus**" to reduce the performance in steps of 5.

Interruption of training

An interruption of the training is detected in case of less than 10 pedal revolutions/min. Pedalling frequency and speed show "0".



Pedalling frequency, speed, performance and pulse (if measurement of pulse is enabled) are displayed as average values. Distance, energy consumption and training time are displayed as total values.

Note:

"Menu", "User" will be explained on page 5 ff, "Display" on

page 9, "Presettings" on page 7", "CoolDown" and "WarmUp" on page 12/13.

Stand mode

If you do not continue the training and do not press any buttons, the display automatically switches to standby mode. You can define the time for this in the "settings/standby" menu. If you press the navigation key "Up" or start/continue your training, the display will switch back to the ready-to-train mode.

Main menu:

The functions of the 4 menus: Users, Programmes, Presettings and Settings are grouped by topics.

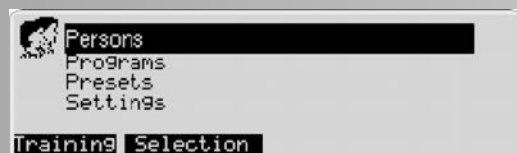
Required input

The following information and settings are required prior to the training in order to fully use the possibilities of the electronics right from the start:

- Personal data of the persons who will use the device. These data are required for calculating pulse and strain limits, fitness test (IPN), training recommendations (coaching) and body mass index (BMI).
- Date and time. Please check their accuracy. The training sessions are stored along with date and time and should be up to date. You can find this menu item in the main menu > settings.

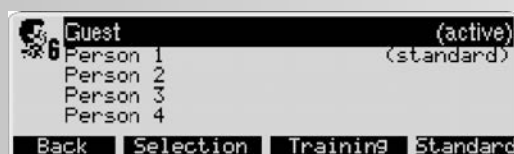
Users

Use this menu to enter users and their individual data and settings and to select who will be the users during the next work out and who will be the users the next time the equipment will be switched on.



Press "Select" to access the submenu under the menu option highlighted in black.

Press "Training" to jump to the standard workout programme of the "active" user.

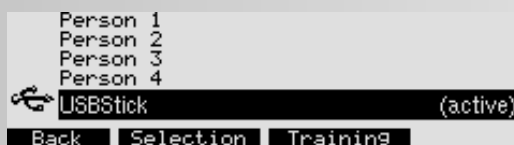


Example:

"Guest" (active) will be working out next.

"User 1" (standard) is to be activated the next time the equipment is switched on.

This setting will be saved until changed again.

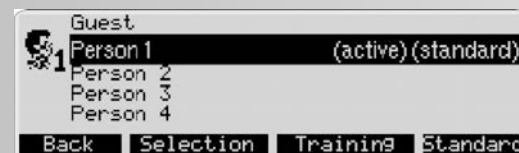


Persons > Select persons

You can select 5 persons. By connecting a USB flash disk to the USB connector, the additional person "USB flash drive" is created. The flash drive requires a FAT32 format. You cannot select a person anymore.

Note:

The person "Guest" has no storage. Presets and settings only apply until the next time you turn on the device.

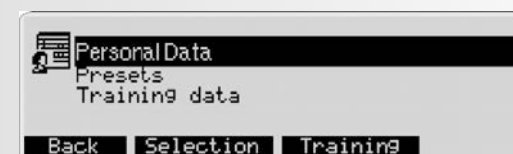


Press "Back" to jump to the "Users" menu.

Press "Training" to jump to the user's standard workout programme.

Press "Standard" to set the user highlighted in black as user the next time the equipment is switched on.

Press "Select" to open the respective submenu of the user highlighted in black.



In this menu, you can choose from 3 submenus:

User Data

Use to enter user-related data.

Presettings

Use to enter data related to display and functions, set workout options and pulse rates.

Workout Data

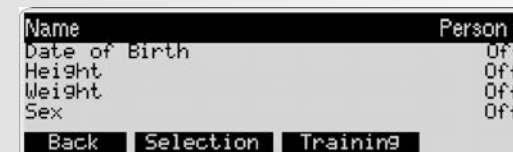
Use to access overall workout data.

Persons > Person 1 > Personal data

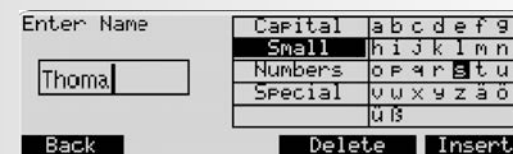
Please enter personal data in this menu.

- Writing a name replaces "Person 1".
- The date of birth influences the values of the pulse presets.
- The body height influences the BMI calculation.
- The body weight influences the BMI calculation and the IPN fitness test.
- All personal data influence the calculation of the IPN fitness test.

User data -> enter Name



Highlight "Name" and press "Select" to access the submenu "Enter Name".



Note:

Delete the entry **User 1** before entering name

Training and operating instructions

Use the navigation keys to select areas and/or characters. The active area is highlighted in black.

Press **"Insert"** to insert the selected character. A maximum of 8 characters may be entered.

Press **"Back"** to enter the entry. Enter at least 1 character, otherwise the option "Back" will not be displayed.

```
Name Thomas
Date of Birth 04.02.1956
Height 186 cm
Weight 86.0 kg
Sex male
Back Selection Training9
```

```
Weight 86.0 kg
Sex male
Training activities none
Resting pulse 60 bpm
BMI 24.9
Back Training9
```

The **-/+** buttons change the values for **"age"**, **"height"** and **"weight"**, resting heart rate after night sleep and the selection of **"gender"** and training activity.

The personal data of our fictitious user "Thomas" could look like this.

Menü:

Programme

This menu contains the overview of the equipment's workout programmes. You can choose between different training possibilities.

```
m
↑↓
Power (manual)
Power (fix)
Power (individual)
HRC (manual)
HRC (fix)
Back Selection
```

```
Power (individual)
HRC (manual)
HRC (fix)
HRC (individual)
IPN
Back Selection
```

Note:

If the content of a menu cannot be displayed within the space of the display, use the navigation keys **"Up"** and **"Down"** to scroll the display. The selection will move and be highlighted in black as you scroll. For the first menu option, the highlighting will be on top, for the last ones it will be on the display's bottom.

Performance (manual):

Changing the performance while working out. Features such as Time, Distance... may be increased or decreased. In these programmes you can record your workout. These are then available as "Prg Record".

Performance (preset):

The performance will be controlled by performance profiles.

Performance (individual)

Adjust the performance profile according to your requirements.

HRC (manual) HRC =Heart Rate Control.

Enter a pulse rate and the performance will be controlled automatically by your pulse rate.

HRC (fixed)

Pulse-profile programmes control the performance according to changing pulse rates.

HRC (individual)

Adjust basic pulse-profile programmes according to your requirements.

IPN

This programme increases the performance and records when your pulse becomes quicker. You will get an evaluation at the end.

Programmes → Performance (manual)

There are 3 training programmes under "performance (manual)": **"Count Up"**, **"Count Down"** and **"Recorded Session"**. They change the performance during the training.

In **"Count Up"** the values count up and in **"Count Down"** the values count down. You can either preset the values or copy them from your presets in the menu: **presets -> training values**.

"Recorded Session" is a training which has been stored under **"Count up"** or **"Count Down"** and can be repeated.

```
Count Up (standard)
Count Down (active)
Recorded Session
Back Standard Training9 Presets
```

Use the **navigation keys "Up"** and **"Down"** to highlight the selection in black and to activate.

Press **"Standard"** to select the highlighted programme as Standard programme of the **"active"** user.

Press **"Training"** to select the highlighted programme and to view the **"Ready for Training"** mode.

"Presets" displays the Presets that yet need to be or have already been entered into **"active"** programmes.

Note:

The functions assigned to the function keys do not change when selecting a workout programme. To avoid redundancy, they will not be repeated in the following.

Programmes → Performance Profiles (fixed)

Under the option **"Performance Profile (preset)"**, 10 training profiles of varying duration and intensity are listed.

Performance will be adjusted according to profile presets.

Next to the programme number, the duration and the distance of the programme are indicated.

```
Prg1 30 min/12.0 km (active)
Prg2 40 min/16.0 km
Prg3 60 min/24.0 km
Prg4 90 min/36.0 km
Prg5 90 min/36.0 km
Back Standard Training9 Presets
```

```
Prg6 40 min/16.0 km
Prg7 60 min/24.0 km
Prg8 60 min/24.0 km
Prg9 90 min/36.0 km
Prg10 90 min/36.0 km (active)
Back Standard Training9 Presets
```

Use the navigation keys **"Up"** and **"Down"** to highlight in black and to activate.

Programmes → Performances (individual)

Under the option **"Performance Profiles (individual)"**, 5 workout profiles are listed. Duration, distance and intensity of these profiles may be changed.

	Prg1	90 min/36.0 km	(active)
	Prg2	90 min/36.0 km	
	Prg3	90 min/36.0 km	
	Prg4	90 min/36.0 km	
	Prg5	90 min/36.0 km	
Back Standard Training9 Edit			

Note:

On how to create "Performance Profiles (individual)" pressing "Edit", please see page 15.

Programmes → HRC programmes (manual)

The menu item "HRC (manual)" contains two training programmes: "Count Up" and "Count Down". In both programmes a **target pulse** is achieved by performance regulation and is maintained over the training period. The target pulse is **either adopted from the default settings in the menu: Default Settings → Default Setting Pulse** or is set to 130, if no data is available. The values, which you preset or which have been adopted from the default settings in the menu: **Default Settings → Training values**, are counted up in the "Count Up" mode and are counted down in the "Count Down" mode.

	HRC Count Up (130 bpm)	(active)
	HRC Count Down (130 bpm)	
Back Standard Training9 Presets		

Programmes → HRC (fixed)

The menu item "HRC (fixed)" contains 5 training profiles, which differ in duration and intensity. In these programmes, **changing target pulses** are achieved by performance regulation. The profile height of the programme depends on the entries of your maximum pulse in the menu: **Default Settings → Default Setting Pulse**. If no data is available, an age of 50 years and a maximum pulse of 170 are set automatically.

	HRC 1	30 min	(active)
	HRC 2	60 min	
	HRC 3	90 min	
	HRC 4	60 min	
	HRC 5	90 min	
Back Standard Training9 Presets			

Programmes → HRC (individual)

The menu item "HRC (individual)" contains 3 training profiles. You can edit the duration and the intensity of these profiles.

	HRC 1	90 min	(active)
	HRC 2	90 min	
	HRC 3	90 min	
Back Standard Training9 Edit			

Note:

On how to create an "HRC (individual)" pressing "Edit", please see page 15.

Programmes > IPN Test

The IPN test requires the displayed personal data to calculate a performance profile and a target pulse. If information is lacking, the "Training" soft button is not available.

	IPN Test	(active)
Back Training9 Presets		

Press "Training" to go to the ready-to-train mode with display of the performance profile.

Press "Presets" to go to the input of personal data. The purpose of the IPN test is providing you with a training recommendation for another training. For this purpose, you will be required to reach your target pulse within a maximum of 15 minutes as from the second level. If it is achieved, the pulse display will flash. You are required to continue the training until the end of this level to see the result.

Name	Thomas
Date of Birth	04.02.1956
Height	186 cm
Weight	86.0 kg
Sex	male
Back Selection Training9	

Weight	86.0 kg
Sex	male
Training activities	none
Resting pulse	60 bpm
BMI	24.9
Back Training9	

Note:

If you do not reach the target pulse, you will receive a notification. In this case, you will be required to increase your data under training activity and repeat the test.

Programmes > Coach Health / Power

After having completed the IPN test, you will receive your test result with an arrow on a scale. A total of 24 training sessions are composed which you can find under IPN test.

Thomas	IPN-Result
28.05.12	0.50
Back	

You can choose between two kinds of training:

Health = health training or **Power** = power training. If you would like to improve the overall condition of your body, select "Health". If you would like to improve your fitness, select "Power".

IPN Test	
	1/24 Coach Health (active)
	1/24 Coach Power
Back Standard Training9 Presets	

Press "Presets" to change the training time.

Note:

If there is no fitness test, you will receive corresponding information.

Remarks:

1. Prior to the first IPN test, we suggest a settling in period of 4x30 minutes within 2 weeks. We advise you to train with an intensity you feel comfortable with at a pedalling rate of 50-60 revs/min.
2. You are advised to do the first test relaxed and without any serious health problems (we recommend a training break of at least one day prior to the test). The heart rate at rest should have been determined prior to the test by determining the average value after at least three measurements directly after having woken up.
3. After 24 training sessions or after 12 weeks you will be

Training and operating instructions

advised to do another test to check the training intensities. For this purpose, determine the heart rate at rest again according to the steps described above and adhere to the described guidelines.

- After these 24 training sessions and/or after the second test, you will get a new block with 24 sessions.
- If you change between health and power training, the training sessions done until this moment are not taken into consideration anymore.

General rules:

For the health training we recommend 2 sessions/week.
For the improvement in performance training we recommend 3 sessions/week.

You are advised, if possible, not to take a break longer than 7 days between two sessions. You should, however, take a break of at least 1 day between two sessions and/or should not do more than 5 sessions per week.

After illness or training interruption of not more than 3 weeks, continue your training block at the current level. In the case of a training interruption longer than 3 weeks, you are advised to complete a new test.

For people taking a β -blocker, the test does not make any sense and is not recommended!

People under the age of 17 are not permitted to take the test.

Training

Selecting a training programme

You can select three different programmes:

1. Training according to performance default settings

- Manual performance input
- Performance profiles
- Recorded sessions

2. Training according to pulse default settings

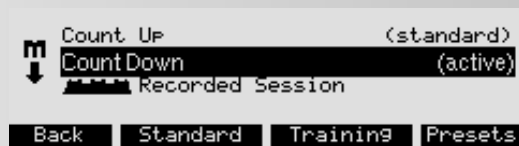
- Manual pulse input
- Pulse profiles

3. Training with instructions (coaching)

You are required to do the IPN test to be categorized and receive a training plan with 24 sessions. After that, there will be a new fitness test with new training sessions.

1a

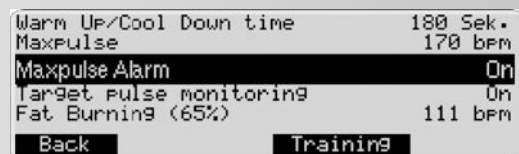
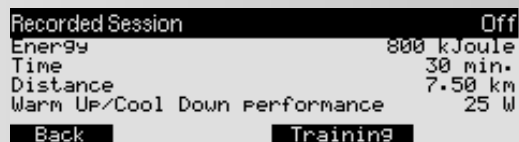
Selecting a training programme by means of manual performance input e.g. "Count Down"



By pressing "Presets" you will skip to the menu "Current default settings". The menu displays the default settings, which are to be entered or have already been entered at the "active programme".

Performance (manual) → Current default settings

In this menu, you can view, change or maintain the default settings for the active programme.



Display: Current default settings

The default settings are the values, which the active user "Thomas" entered beforehand under **Default Settings** → **Training values and pulse default settings**:

Energy consumption	=	800 kJoule
Training time	=	30 min
Workout distance	=	7.50 km
Maximum pulse (selected)	=	170 bpm
Alarm at exceeding the maximum		

pulse	=	on
Target pulse monitoring	=	on
Fitness (75%)	=	active

By pressing "Training" you will adopt the values and settings and you skip to the view "Training stand-by"

Training stand-by

This image illustrates values and settings



Display: Top

Current pedal rate = 0 min⁻¹

Current speed = 0.0 km/h

The following was taken over from "Thomas'" presets: workout distance = 7.50 km

Duration of work out = 30:00 min

Energy consumption = 800 kJoule

Current performance ratio = 4 % (current performance to set maximum performance 600 watt.) preset performance = 25 watt

Current pulse = 70 bpm [beats/min] Current pulse ratio = 41% (current pulse to maximum pulse)

Display: Bottom

Active person = Thomas

Programme symbol

Current date and time

Active programme = perform. (manual) Count Down

Press "Menu" to jump back.

Press "User" to jump back to the "Users" menu

Press "Presets" to jump to the "Current Presettings" menu to display the presets that yet need to be or have already been entered in "active" programmes.

Note:

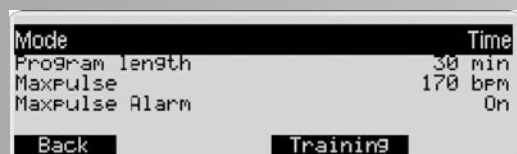
The performance can be increased or decreased by **25 Watt** by means of the **navigation keys** or by **5 Watt** by means of the **-/+** keys during training stand-by or training

1b

Selecting a training programme with performance profile: e.g. Performance (fixed) Programme 1"



By pressing **"Presets"**, you will skip to the menu "Current Default Settings" and the default settings, which are to be entered or which have already been entered at the "active" programme are displayed.



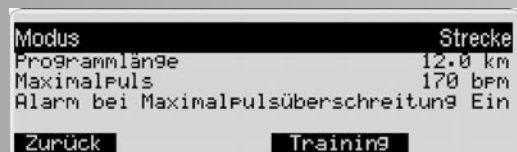
Display : Current default settings

Mode	=	time
Programme length	=	30 min
Max. pulse (selected)	=	170 bpm
Alarm at exceeding the maximum pulse =		on

Here the default settings are the values, which the active user "Thomas" entered beforehand under **Default Settings -> Pulse default settings**:

Programme Mode Time or Distance

Pressing **"-/+"** will switch the **mode** of the programme from **time** to **distance**. Under **programme length**, you can adjust the **time** from 20 - 90 minutes and the **distance** from 8 kilometres to 36 kilometres (cross ergometer 4 - 18 kilometres).



Display: Current default settings

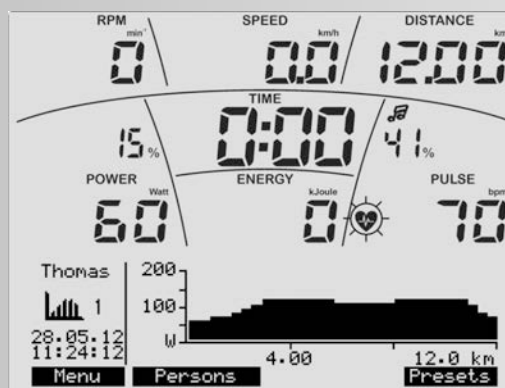
Mode	=	Distance
Programme length	=	12.0 km

By pressing **"Training"** the values and settings are adopted and you skip to the view **"Training stand-by"**.

Note:

With the bike ergometer, 1 minute corresponds to 400 metres. With a cross ergometer it is 200 metres.

Training stand-by



Display: Top

Distance = 12.0 km

Display: Bottom

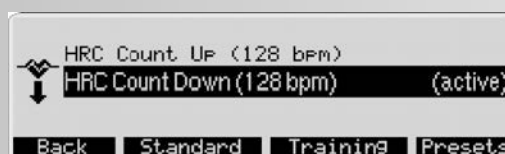
Displaying programme profile in distance mode

Note:

The performance profile may be increased or decreased while working out or in the training stand-by mode by **5 watt** by using the **-/+** keys or by **25 watt** by using the **navigation keys left/right**.

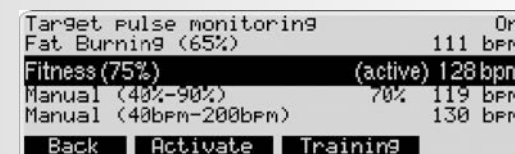
2a

Selecting a training programme, entering the pulse manually, e.g. "HRC Count Down



By pressing **"Presets"**, you will skip to the menu "Current Default Settings" and the default settings, which are to be

entered or which have already been entered at the "active" programme are displayed.

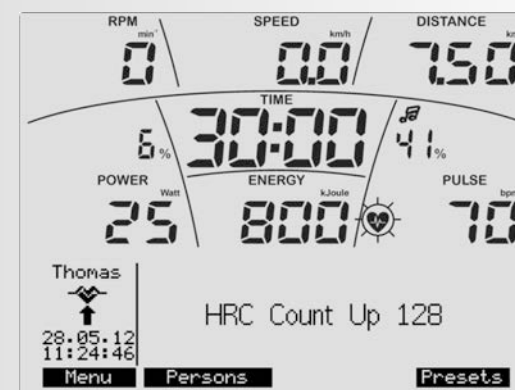


Display: Current Default Settings

The value **128** is selected as pulse default setting for the training by selecting Fitness (75%) actively as target pulse.

By pressing **"Training"** the values and settings are adopted and you skip to the view **"Train stand-by"**.

Training stand-by



Display: Training stand-by

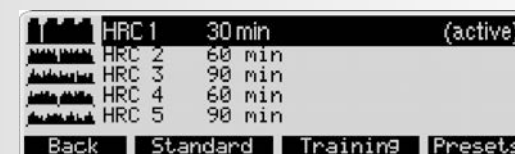
The values were adopted from the current default settings of the programme.

Note:

The **target pulse** can be increased or reduced by the **-/+** keys during training stand-by or during training.

2b

Selecting a training programme with pulse profiles: e.g. "HRC (fixed) HRC Profile 1"



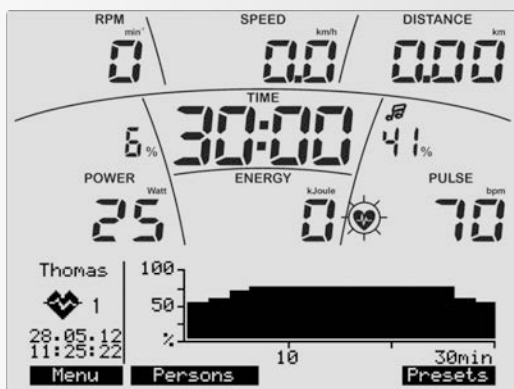
Training and operating instructions

By pressing **"Presets"**, you will skip to the menu "Current Default Settings" and the default settings, which are to be entered or which have already been entered at the "active" programme are displayed.

Program length	30 min
HRC Start Power	25 W
Maxpulse	170 bpm
Maxpulse Alarm	On
Back	Training9

By pressing **"Training"** the values and settings are adopted and you will skip to the view **"Training stand-by"**

Training stand-by



Display: Training stand-by

The values were adopted from the current default settings of the programme.

Note:

The pulse profile height can be increased or reduced by the **-/+ keys**: during training stand-by the entire profile and during training only the workout.

Training

The training programme "Performance (manual) Count Down" is used as an example for the training display.



Display: Training stand-by

If you pedal with more than 10 rpm, the training display will start.



During training, you can change the multi-purpose display in order to view more information.

Pressing **"Display"** switches the information from "Current Training" to "Programme Indication", then to "Pulse Information", then **"Average Values"** etc.

Display : Current Training

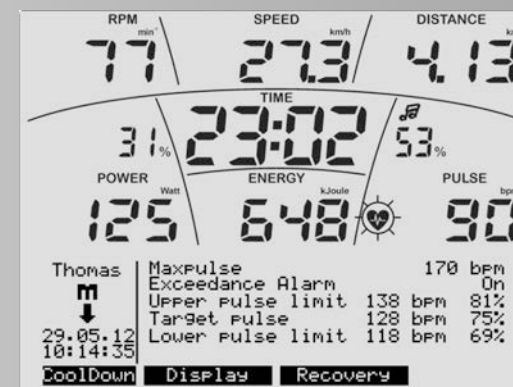
The upper display shows the Presettings in count-down mode and the lower display shows workout values in count-up mode.

In this example the performance has been increased to 125 Watt and the pulse has increased to 90 beats/min.



Display: Programme indication

The current programme is displayed



Display: Puls information

The pulse settings and default settings are display



Display: Average values

The average values are displayed.

Note:

If a default setting has counted down to "Zero", a count-up mode will start. When the last default setting has been reached, you can hear a short beep.

Training Functions

Change of the operation mode from independent of revolutions per minute to dependent on revolutions per minute

This feature is not available with all devices. If it is, it is offered with the "Fest/Var" soft button.

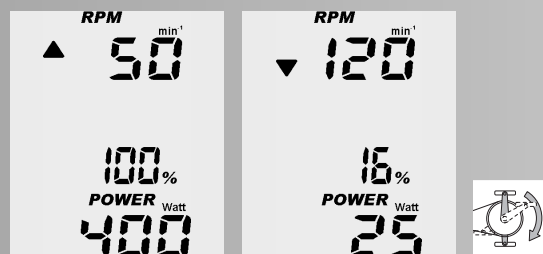
At the beginning, the device works independent of revolutions per minute.

The pedalling frequency is displayed as a value.



Press "Fest/Var" to change the operation mode to dependent on revolutions per minute. A double arrow displays this mode. The performance limit is cancelled. Changing is only possible during training.

Rpm and Performance Control

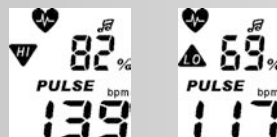


If the displayed performance cannot be achieved at a given pedal rate in non-rpm-linked mode, an upwards- or downwards-pointing arrow will be displayed.

For technical reasons, a performance of 400 watt cannot be achieved at 50 rpm, for instance, or 25 watt at 120 rpm, for that matter. The arrows indicate that you need to pedal faster or slower to make it possible to achieve a given performance.

Pulse Monitoring (Target Pulse)

If you activated the monitoring mode in target pulse, your pulse will be monitored before and during the work out. Our fictitious user "Thomas" activated a target pulse of 128. If the target is overshoot by 11 beats (139), the control function displays a downward pointing HI arrow. Conversely, if the target is undershot by 11 beats (117), an upward pointing LO arrow will be displayed



HRL Traffic Light Function = Heart Rate Light

Display colours and their meaning

The function has 3 colours: blue, green and red. In order to provide prominent information on heart rate events, the colours are set as follows:

Red background light (colour=2)

Target heart rate monitoring is active.

The heart rate has risen to be out of the target heart rate monitoring range (+11 beats) (same as the HI arrow display) The maximum heart rate has been exceeded during maximum heart rate monitoring (same as MAXPULSE display).

Green background lighting (colour=3)

Target heart rate monitoring is active and training is underway.

The heart rate has reached the target heart rate and remains within the target heart rate monitoring range (-/+ 10 beats)

Blue background lighting (colour=4)

The target heart rate monitoring is active and training is underway.

Heart rate has fallen below the heart rate monitoring range (-11 beats) (same as the LO arrow display)

Note:

The lower limit will only be displayed, if you are training and the target pulse had been reached before.

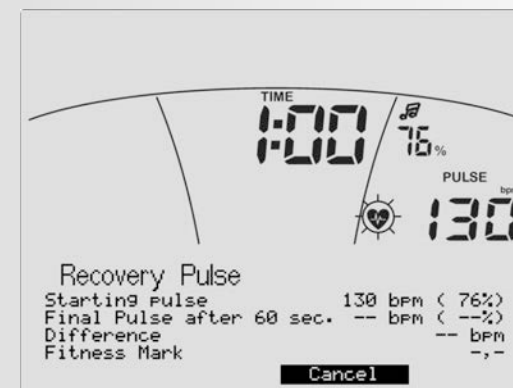
Pulse Monitoring (Maximum Pulse)

If maximum pulse has been activated in pulse monitoring and the maximum pulse has been overshoot, MAX and a blinking HI arrow will be displayed. If the alarm signal has been activated (note symbol), an audible double alarm signal will also be given.



Recovery Pulse Taking

Recovery pulse means taking the pulse within one minute while counting down. Your pulse will be taken twice, at the beginning and at the end of the time interval; from the difference, a level of fitness will be calculated. Press << to start a new function.



Display: Recovery Pulse Rate

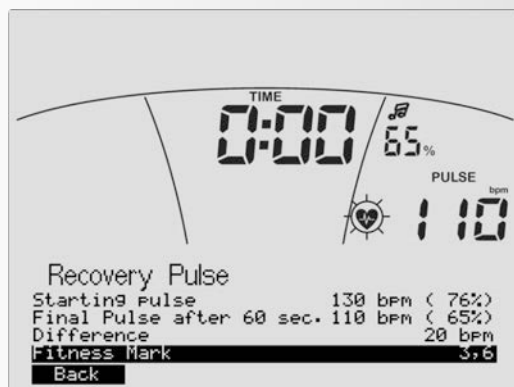
Counting down, displaying current pulse rate and pulse rate at the start of the recovery pulse rate function. The percentage indicates the ratio of current pulse rate to maximum pulse

Press "Cancel" to stop the recovery pulse taking and to jump to the training stand-by mode, displaying average values.

Note:

The recovery pulse function will only be offered, if the pulse rate is being displayed.

Training and operating instructions



Display: Recovery Pulse Rate

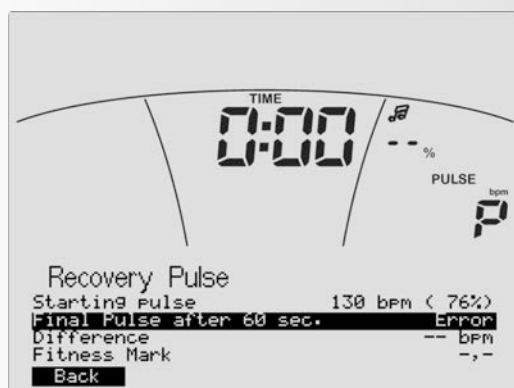
End of recovery pulse taking, displaying the end pulse after 60 seconds, from the difference between the pulse rates at the start and the end a fitness level will be determined accordingly.

Note:

Press "Back" to jump to the training stand-by mode, displaying average values.

Recovery Pulse Taking and Pulse Loss

If the pulse taking is interrupted, the count down will be completed, without calculating a fitness level.



Press "Back" to jump to the training stand-by mode, displaying average values.

Interrupting or Terminating the training

If there are less than 10 pedal rotations/min or the "reco-

very" function is being pressed the electronic equipment registers interruptions in the work out. Average values will be displayed.



Display:

The training data will be displayed as long as has been set in the menu "Settings -> Standby". If you do not press any keys and do not work out in this time, the electronic equipment will switch to the standby mode.

Resuming the Training

If you resume the training within the "Standby Time", your last values will be continued or counted down.

Individual training Profiles (Edit)

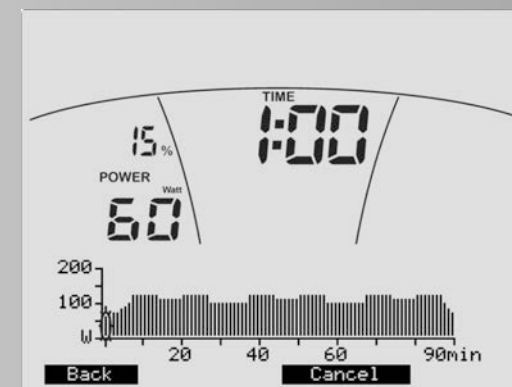
The menu "Programmes" includes an option for creating individual performance profiles and HRC-profile programmes.

Performance (individual)

There are 5 performance programmes with the same distance and duration, which may be adjusted individually.

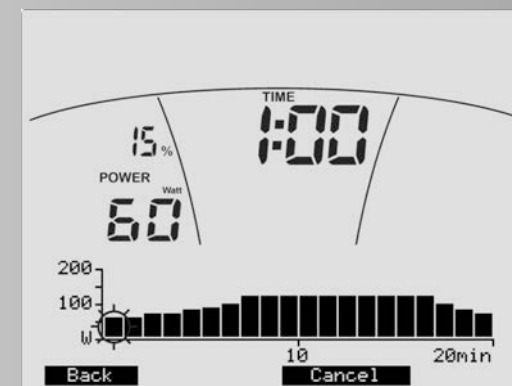
Prg1	90 min/36.0 km	(active)
Prg2	90 min/36.0 km	
Prg3	90 min/36.0 km	
Prg4	90 min/36.0 km	
Prg5	90 min/36.0 km	

Press "Edit" to change to the submenu "Editing Programmes".



Each minute will be displayed as a bar. The workout time (duration) may be set between 20 and 90 minutes. Use -/+ keys to shorten or extend the training time by 10 minutes.

The navigation keys left/right mark a bar. It will be displayed blinking. The applicable period of time will be displayed under TIME and the performance under POWER. Use the navigation keys up/down to change the performance of the blinking bar.

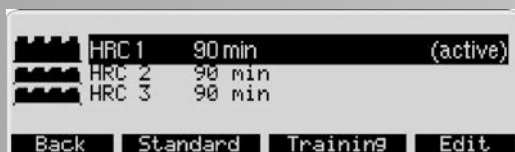


An adjusted programme could look like this. Press "Back" to save your individual profile.

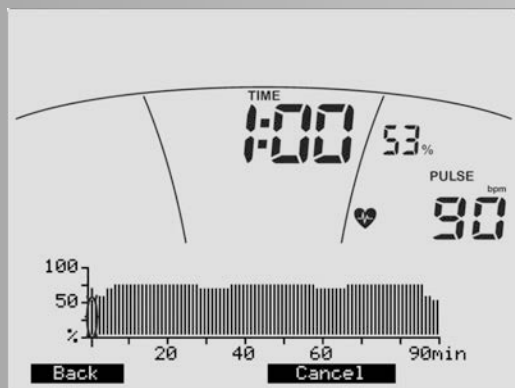
Prg1	20 min/8.00 km	(active)
Prg2	90 min/36.0 km	
Prg3	90 min/36.0 km	
Prg4	90 min/36.0 km	
Prg5	90 min/36.0 km	

Display: programme selection with adjusted programme 1 HRC (individual)

You can chose from 3 pulse profiles for editing.



Press **"Edit"** to change to the submenu **"Editing Programme"**.



Each minute will be displayed as a bar. The training time (duration) may be set between 20 and 90 minutes. Use -/+ keys to shorten or extend the workout time by 10 minutes.

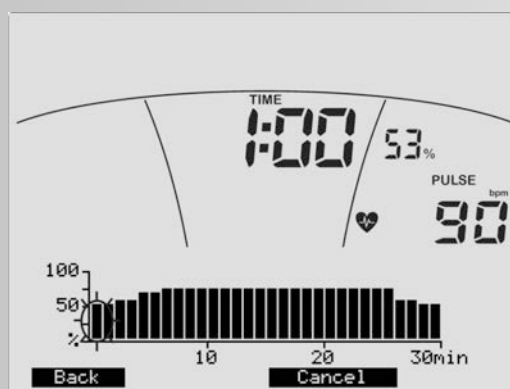
Use the **navigation keys left/right** to mark a bar. It will be displayed **blinking**. The applicable period of time will be displayed under **TIME** and the pulse under **PULSE**.

Use the **navigation keys up/down** to change the target pulse of the blinking bar.

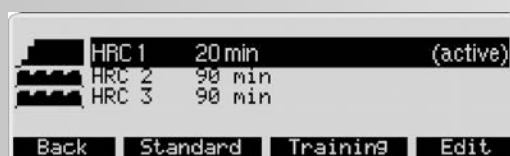
The target pulse of a given bar, will be displayed in percent and in beats and refers to your maximum pulse, provided you entered it in. The target pulse may be adjusted by 20 - 100% of the maximum pulse.

Note:

If the maximum pulse of the active person is not available, a 50-year-old standard user with a maximum pulse of 170=100% will be used.



An adjusted programme could look like this. Press **"Back"** to save your individual profile..



Display: Programme Selection
with adjusted programme 1

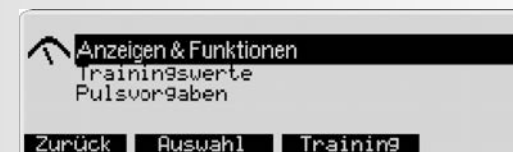
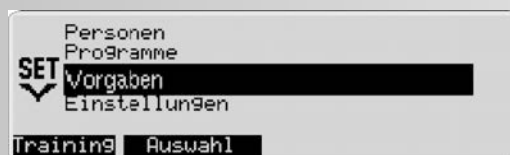
Note:

The adjusted individual programmes and profiles will be saved under each individual user and will not replace the programmes and profiles of other users.

Menu

Presets

Under "Presets" all users (guest, U1-U4) may adjust and save settings and presettings for the long term, irrespective of each other. The settings entered under guest will be replaced by standard values when the equipment is restarted.



This menu includes 3 submenus:

1. Display & Functions

Access to set your performance values, speeds and how the energy consumption is displayed.

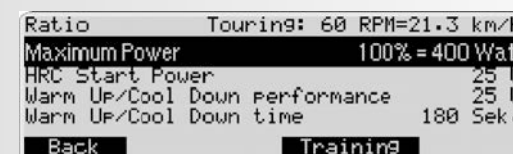
2. Training Values

Access to set values for energy, workout time and distances that will be taken over as standard values under Presets.

3. Presetting Pulse Rates

Access to set how your pulse will be monitored and which value will be used.

Presettings → 1. Display & Functions



- Use **"Transmission"** to set the speed that is to be displayed: Mountain: 60 pedal rotations result in 15.5 km/h, Touring: 21.3 km/h and Racer: 25.5 km/h.

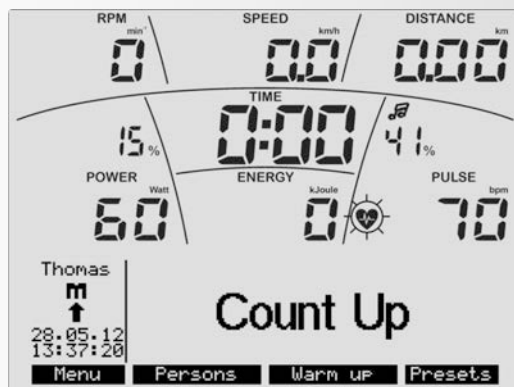
Note:

- Use **"Maximum Performance"** to retain or limit the maximum performance of the equipment. Above this limit, no performance will be tolerated. The % bar in the performance display shows the current ratio to the set maximum performance.
- Use **"HRC Start Performance"** to set the starting performance between 25 - 100 watt in pulse-monitored programmes, if the preset value appears too high or too low to you.
- Use **"WarmUp- / CoolDown Performance"** to enter a value between 25 - 100 watt as target performance, resulting in an automatic performance increase in the programmes Count Up/Count Down (WarmUp) or performance decrease (CoolDown) in relation to the target performance.
- Use **"WarmUp-/CoolDown-Duration"** to set the duration of the WarmUp-/CoolDown function between 60-240 seconds

Training and operating instructions

WarmUp

During the initial 30 seconds, the performance remains constant, then the performance will be increased until the target performance is reached (previously set performance).



Press "WarmUp" to display a progress bar.



The progress bar standing at 0%.



When pedalling, the progress bar is growing to 100%. In this example, the performance increased from 25 to 60 watt.



When 60 watt = 100% have been reached, there will be three sound signals before the function will be terminated.

Note:

The function "WarmUp" will **only** be offered, if the performance set is higher than the WarmUp/CoolDown-performance

under Display & Functions.

CoolDown

The performance will be lowered down to the WarmUp/CoolDown performance which will be kept for 30 seconds until the WarmUp/CoolDown duration has been reached.



Press "CoolDown" to display a progress bar.



The progress bar standing at 3%.



Example: When the CoolDown performance = 100% is reached, there will be 3 audible signals and the function terminates.

Note:

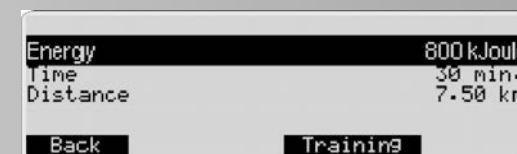
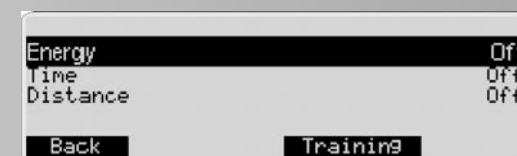
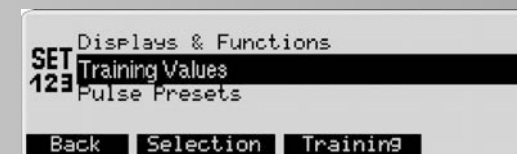
The "CoolDown" function will **only** be offered, if the current workout performance is higher than the WarmUp/CoolDown performance under Display & Functions. Press "CoolDown" to display a progress bar.

- Use "Energy Calculation" to set whether, your energy consumption (in real terms) or the energy turnover of the

ergometer (physical) is to be displayed.

- Use "Energy Unit" to set whether energy consumption is to be displayed in kJoule or kcal.

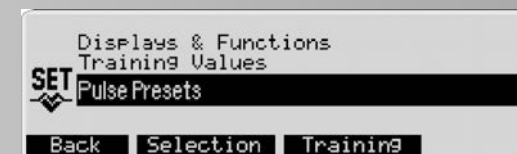
Presettings → 2. Training Values

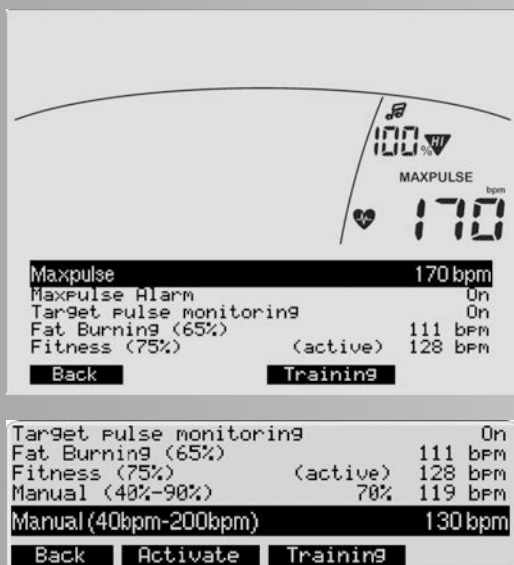


After entering energy consumption, workout duration and distances, the values could look like this. When you enter workout values, they will be loaded into the "ready for work out" mode of the workout programmes. These values may still be changed. At the start of the work out, these values will be counted down, at zero blinking characters indicate that the values preset have been reached. The values will not influence the operation of the ergometer.

Presettings → 3. Pulse Settings

Once the user data of the "active" user has been entered, some pulse-rate values will be displayed. If not, the display will show "Off" instead of the values.





- The Value **"Maximum Pulse"** 170. This value has been informed by the user's data (220 - age), e.g., Thomas' (50 years). Medically founded, it indicates the maximum tolerable pulse rate that users of a given age may have but should not have while working out.
- Use **"Maximum Pulse"** to reduce or deactivate this value. The pulse rate indicated in % refers to this value: Current pulse to maximum pulse and the depths of sections of pulse programmes. You may enter values to select target pulse values.
- Use **"Alarm if Maximum Pulse Exceeded"** to set whether an audible alarm should be activated when the maximum pulse has been exceeded. If **"Maximum Pulse"** has been set to Off, the alarm will also be deactivated.
- In **"Target Pulse"**, you have 2 options: **"Target Pulse Control"** On or Off.

Off will disable the target pulse monitoring function.

On gives you further options, if **"Maximum Pulse"** has been set to On:

"Fat Burning (65%)". This means that 65% of your age-specific maximum pulse will be controlled or monitored according to the user's data (220 - age) as pulse rate value. Example: 111

"Fitness (75%)". This means that 75% of your age-specific maximum pulse has been used as a basis. Example: 128

"Manual (40%-90%)". This means that you may enter a value in % between 40% and 90 % by using the **-/+ keys**. Example: 128 (70% will be calculate as recommended value)

On gives you just one option, if **"Maximum Pulse"** has been set to Off:

Manual (40bpm - 200bpm). This means that you may enter a non-age-specific pulse value between 40 and 200 by using the **-/+ keys**.

Example: 130 (Will be displayed as recommended value)

Press **"Activate"** to activate the selection highlighted in black (active).

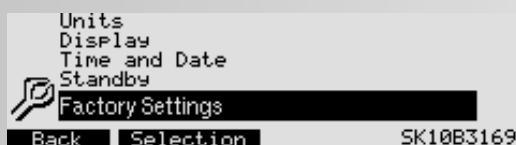
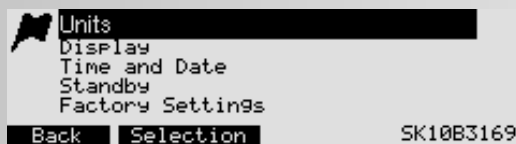
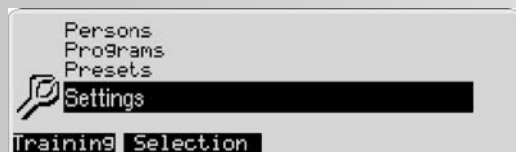
The selected target pulse will be used as presetting for pulse programmes. During the work out, this value will be achieved and held constant by performance control. For the other workout programmes, it will be used as a guideline to achieve pulse values that are 10 beats below or over the workout target pulse. This pulse rate will be controlled by two arrows in the pulse display.

Press **"Back"** to save the settings.

Menu

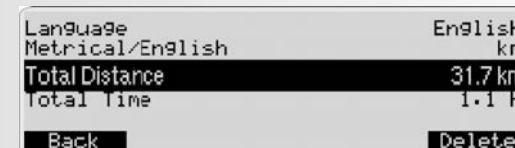
Settings (for all users)

This menu offers the possibility to carry out display- and appliance-specific settings and adjustments in 5 sub menus. These adjustments apply to all users.



Settings -> 1. Units

Here you determine in which language the menus are displayed, the display of speed and distance in kilometres or miles. You can also delete the values of the overall kilometres and the overall training time.



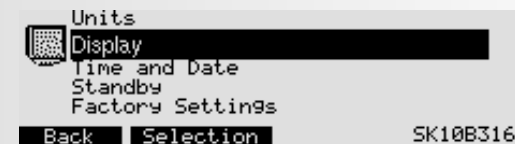
Press **"Delete"** followed by **"Delete OK"** to execute this operation.

Press **"Back"** to save the settings.

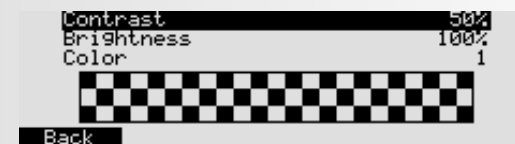
Note:

"Delete OK" deletes the total kilometre values and the total time.

Settings -> 2. Display



Here, you can set brightness, contrast and background colour of the display. 0=Off, 1=light blue, 2=red, 3=green, 4=blue, 5=turquoise



Press **"Back"** to jump back to the main menu. The settings will be saved.

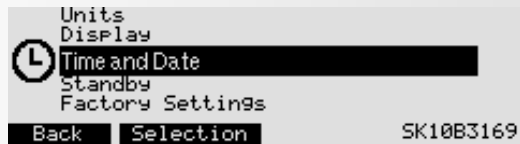
Press **"Cancel"** to jump back to the main menu. The settings will not be saved.

Note:

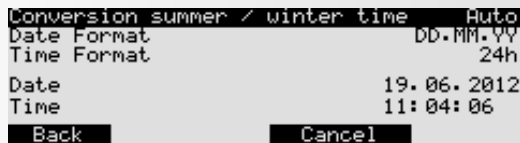
When the optimal contrast is set, there will be no heavy shades. The setting **"Contrast"** applies to the lower display and **"Brightness"** to both displays.

Training and operating instructions

Settings → 3. Time and Date.

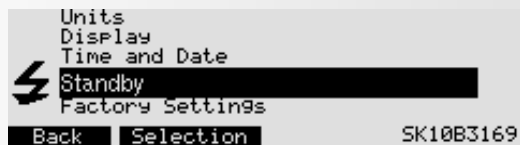


In this menu you may set time and date, display formats and other display options.

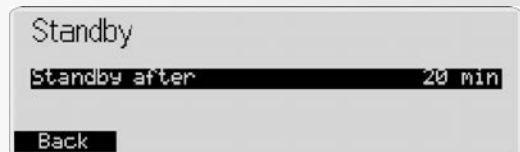


Use “-/+” to change settings, formats and values.
Press “Back” to save the settings.

Settings → 4. Standby

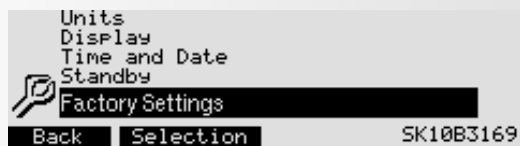


In this menu, you may set the period of time the display takes to switch off after the work out when no more keys will be pressed.



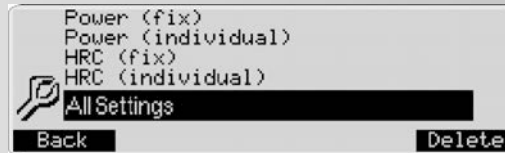
Press “Back” to save the settings.

Settings → 5. Factory Settings



In this menu, the original programmes of the different groups

of programmes can be restored. Any programme changes will be deleted.



Press “Delete” to get to the function “Delete OK”.

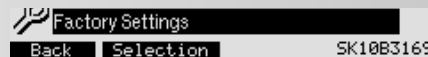
Press “Delete OK” to delete the entries and changes of the menu options highlighted in black. For programmes, the original settings will only be restored for active users.

Press All Settings to delete all settings of all users.

Press “Back” to jump to the menu “Settings”.

Firmware Update

The display of the operating software (firmware) is on the right bottom side in the menu “Settings”.



The last 4 numbers indicate the firmware version: here 3038. If later versions (higher numbers) are offered on our homepage, you may perform an update. For further information please visit our website: www.kettler.de > sport.

General Information

System beeps

Switch-on

Upon switching-on during the segment test, a short beep is heard.

End of programme

A programme end (profile programmes, count-down) is indicated by a short beep.

Exceeding maximum pulse

If the preset maximum pulse is exceeded by one pulse beat, every 5 seconds two short beeps can be heard.

Error indication

In case of an error, 3 short beeps can be heard.

Recovery

In this function, the flywheel mass is braked automatically. Further training is not recommended.

Calculation of the fitness grade (F):

$$\text{Grade (F)} = 6.0 - \left(\frac{10 \times (P1 - P2)}{P1} \right)^2$$

P1 stress pulse,

P2 = recovery pulse

F1.0 = very good,

F6.0 = insufficient

Switching time/distance

With the programmes “Performance Profiles”, you can switch the profile per column in the settings from time mode (1 minute) to distance mode (400 metres or 0.2 miles). Cross ergometer: (200 metres or 0.1 miles).

Profile display during training

At the beginning the first column is flashing. After that, one column after the other is flashing, from left to right during training.

Rotation-speed independent mode

(constant performance)

The electromagnetic eddy-current brake regulates the braking torque to the preset performance in case of alternating pedal rates.

Arrows pointing upwards/downwards

(Rotation-speed independent mode)

If a certain performance cannot be achieved with the rotation speed (e.g. 400 Watt at 50 pedal rotations), the upward or downward arrow indicates when faster or slower pedalling is required.

Rotation-speed dependent mode

(constant braking torque)

The eddy-current brake sets a constant braking torque. Only pedalling will change the performance.

Calculation of the average values

The calculation is effected per training session.

Pulse measuring

If you lose the pulse signal, the performance of the device will remain constant for approx. 60 seconds and is then slowly adjusted downwards.

Information on pulse measuring

The pulse calculation starts when the heart symbol in the display flashes according to your pulse beat.

With ear clip

The pulse sensor operates with infra-red light and measures the changes in the light permeability of your skin caused by your pulse beat. Before fastening the pulse sensor to your ear lob, please rub it strongly 10 times in order to increase blood circulation.

Avoid interfering impulses.

- Fasten the ear clip carefully at your ear lob and try to find the most favourable point for sensing (heart symbol flashes without interruption).
- Do not train directly under strong incidence of light, e.g. neon light, halogen light, spot light, sunlight.
- Completely avoid any vibrations and wobbling of the ear sensor including cable. Always fasten the cable with the clip at your clothes or - even better - at a headband.

With a chest strap

Please read the instructions on the back of the packaging. Mobile telephones, TV sets and other electronic equipment generating an electric field may create problems for heart-frequency measurement.

Malfunction in the training computer

Turn the main switch off and then on again. In case of a malfunction at the date or time display, change the battery on the backside of the display panel. (See assembly instructions)

Information on the interface

Via this interface, you are able control the device with a pc / notebook by means of the software WORLD TOURS. For further information on software and updates (firmware) for this device please visit our website: www.kettler.de.

Training Instructions

You can determine whether or not your course of training has had the desired effects after a few weeks by doing the following:

1. You achieve a certain level of staying power with less cardiovascular output than before;
2. You achieve a certain level of staying power for a longer period of time, though with the same cardiovascular output;
3. After achieving a certain level of cardiovascular output,

you recover more quickly than previously.

Standard values for endurance training

Maximum pulse rate: Maximum stress means achieving the individual maximum pulse rate. The achievable maximum heart rate depends on the age.

The following rule of thumb applies: The maximum heart rate per minute equates to 220 pulse beats minus your age.

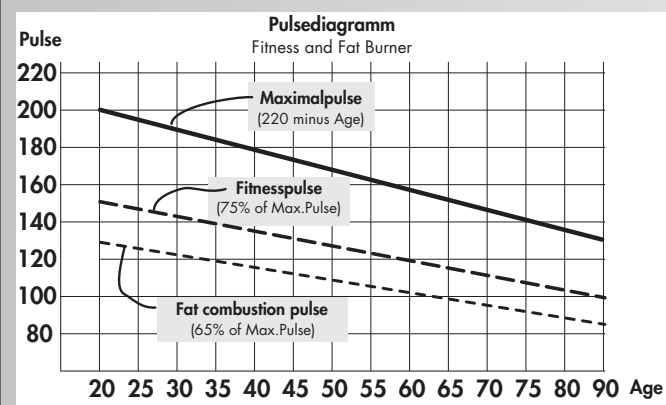
Example: Age 50 years > $220 - 50 = 170$ pulse beats/min

Weight: Another criterion for determining the optimal training data is the weight. The target specification for stress is 3 Watt/kg weight for men and 2.5 Watt/kg weight for women. You must also take into consideration that the physical efficiency decreases at the age of 30 and beyond: with men approx. 1% and with women approx. 0.8% per life year.

Example: Man, age 50; weight 75 kg
> $220 - 50 = 170$ pulse beats/min maximum pulse
3 Watt x 75 kg = 225 Watt
> Minus "age discount" (20% of 225 = 45 Watt)
> $225 - 45 = 180$ Watt (target specification in case of stress)

Stress intensity

Stress pulse: The optimal stress intensity is achieved at 65 - 75% (see diagram) of the individual cardiovascular performance. This value will change, depending on the age.



Amount of stress

Duration of a training session and frequency per week:

The amount of stress can be regarded as ideal when 65 -

75% of your personal cardiovascular performance is achieved over an extended period of time.

Rule of thumb:

Training frequency	Duration of training
daily	10 minutes
2-3 times a week	20-30 minutes
1-2 times a week	30-60 minutes

You should select the Watt performance in such a way as to maintain your muscle stress over an extended period of time.

Higher performances (Watt) should be effected in connection with a higher pedal rate. Too low a pedal rate (less than 60 rpm) leads to a static stress on the muscles and thus to premature fatigue.

Warm-Up

At the beginning of each training session you should limber up for about 3-5 minutes, slowly increasing the exercise so as to get your cardiovascular system and your muscles going

Cool-Down

So-called "cooling down" is equally important. After each training session (after/without recovery), you should carry on pedalling with a small pedal resistance for a further 2-3 minutes.

The stress in your further endurance training should first of all be increased via the amount of stress, e.g. instead of 10 minutes, do 20 minutes a day; or instead of training 2x a week, train 3x. Along with structuring your endurance training to suit your personal requirements, you can always fall back on the training programmes integrated in your training computer.

Glossary

Age

Input for the calculation of the maximum pulse.

B.M.I

Body Mass Index: Value depending on weight and height.

Calculation of the BMI:

$$\frac{\text{Weight (kg)}}{\text{Height}^2 (\text{m}^2)} = \text{Body Mass Index}$$

Training and operating instructions

Example of Thomas:

Weight 86 kg

Height 1.86 m

$$\frac{86 \text{ (kg)}}{1,862 \text{ (m}^2\text{)}} = 24,9$$

Standard values:

Age		BMI .		
19-24 years	19-24	Classificação	homem	mulher
25-34 years	20-25	Baixo peso	<20	<19
35-44 years	21-26	Peso normal	20-25	19-24
45-54 years	22-27	Excesso de peso	25-30	24-30
55-64 years	23-28	Obeso	30-40	30-40
> 64 years	24-29	Muito obeso	>40	>40

The result of Thomas (50 years) shows a BMI of 24.9, which is a normal value. Deviating from the standard values can result in damages to your health. Please consult your doctor.

Control

The electronic system regulates the performance and the pulse on manually entered or preset values.

Dimension

Units for displaying km/h or mph, Kjoule or kcal, hours (h) and performance (Watt).

Energy (realistic)

Bike ergometer:

The energy metabolism of the body is calculated with a degree of efficiency of 25% necessary for the mechanic output. The other 75% are converted into heat.

Cross ergometer:

Here the ratio is 16.7% and 83.3%.

Fat consumption pulse

Calculated value: 65% max. pulse

Fitness pulse

Calculated value: 75% max. pulse

Manual

Calculated value from: 40 - 90% max. pulse

Maximum pulse

Calculated value: 220 - age

Pulse monitoring

If an arrow appears, which is pointing downwards, your pulse is 11 beats above the target pulse. If an arrow appears, which is pointing upwards, your pulse is 11 beats below the target pulse.

Menu

Display, in which values are shown or settings are changed

Percentage scale

Comparison between the current performance and the maximum preset appliance performance.

Performance

Current value of the mechanic (braking) power in Watt. This is the power, which the appliance converts into heat.

Profiles

A bar display showing performances or pulses over a period of time or a distance.

Programmes

Training possibilities which present manual performances or target pulses or performances or target pulses determined by the programme.

Pulse

Measuring the heart beat per minute.

Recovery

Measuring the recovery pulse at the end of the training. A difference is calculated from the starting and the end pulse and a fitness grade is calculated on that basis. If you do not change your training, the improvement of this grade is an indicator of your fitness.

Reset

Delete the contents and restart the display

Interface

USB female connector for data transfer with a PC.

Target pulse

Pulse value, which is to be achieved, either manually or determined by the programme.

KETTLER



® HEINZ KETTLER GmbH & Co. KG
Postfach 1020 · D-59463 Ense-Parsit
www.kettler.net
docu 3284b/05.13