Abb. ähnlich

Trainings- und Bedienungsanleitung SM 3290

GB

Table of Contents

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This sign in the instructions refers to the glossary where the particular term is explained.

Safety Instructions

Note the following points for your own safety:
• The training apparatus must be set up on a suitable, stable surface.
• Before the first use and also after approx. 6 operating days, the joints are to be checked for firmness.
• In order to avoid injuries as a result of incorrect loading or excessive loading, the training apparatus must only be used in accordance with the instructions.
• It is not recommended that the apparatus be set up in damp spaces, because this will in time lead to rusting.
• At regular intervals, check that the training apparatus is in correct working order and that it is in proper condition.
• The safety / technical checks are among the duties of the operator and must be carried out regularly and properly.

• Defective and damaged parts are to be replaced immediately.
  Only use original KETTLER replacement parts.
• The apparatus must not be used until it has been repaired.
• The safety level of the apparatus can only be maintained if it is regularly checked for damage and wear.

For your safety:
• **Before taking up training, have your family doctor advise you on whether or not you are in suitable health for training with this apparatus. The medical findings should be the basis for the structuring of your training programme. Incorrect or excessive training can lead to damage to health.**

Short Description

The computer has a function area with keys and a display with changeable symbols and graphics.

Display

Function Area
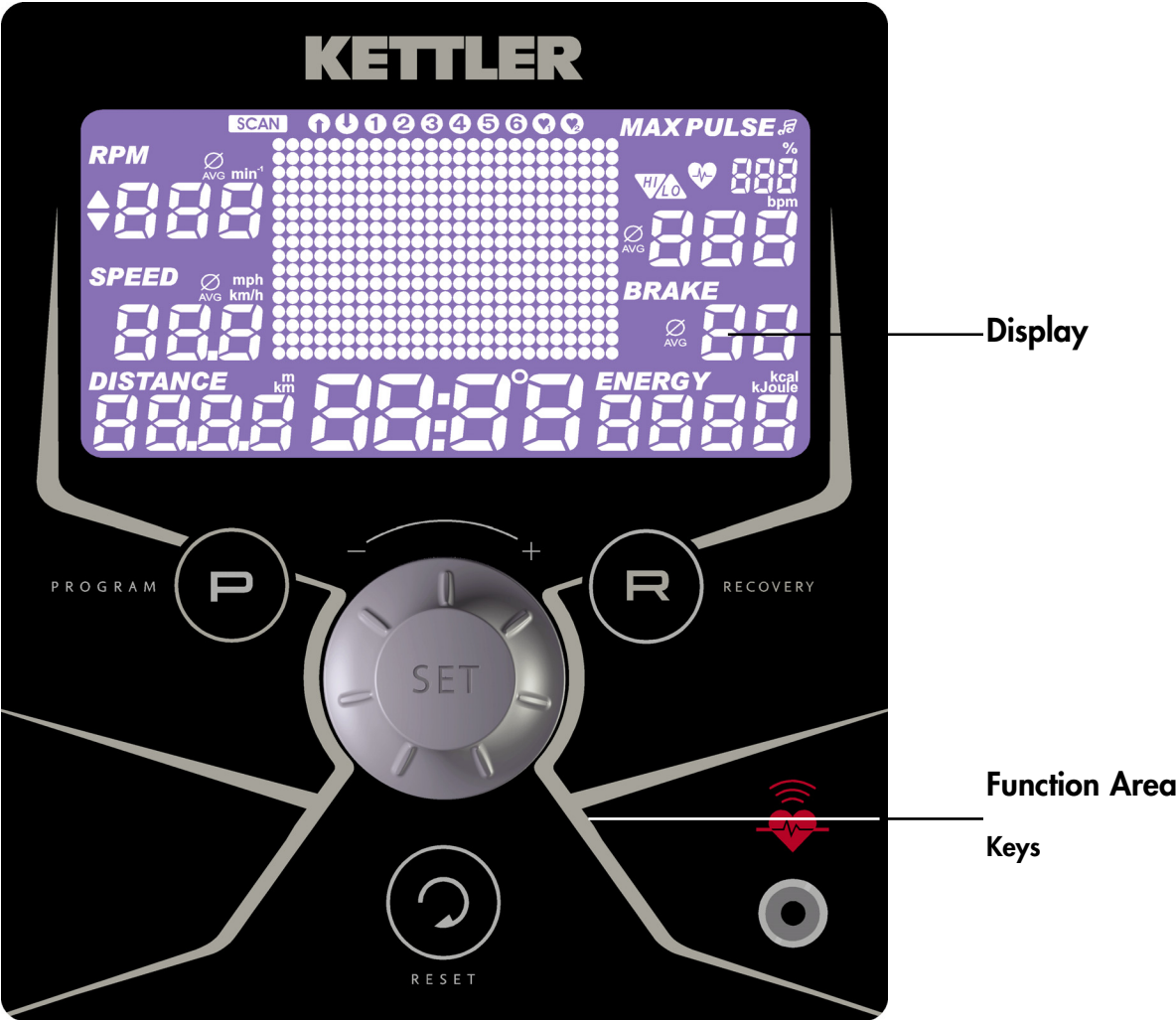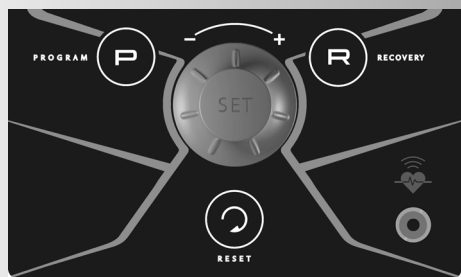
Keys

Getting started

Scope of function

The basic functions of the keys will be explained subsequently.

The detailed application will be specified in the individual chapters. The name of the function keys will be used in these specifications.

SET

The SET key is combined with the +/– adjusting knob. The settings and functions selected by turning the knob can be confirmed by pressing the SET key.

+/– Adjusting knob

The +/– adjusting knob is combined with the SET key. The settings can be modified step-by-step by turning the adjusting knob slowly. Turning the knob quickly will allow the settings to be modified quickly. The settings, menus, programmes and functions selected by turning the knob can be confirmed by pressing the SET key.

– Various pre-setting values can be set via the adjusting knob before the start of the training. The device must be in the STOP position for this.

– The incline or decrease of the tread can be adjusted via the knob during the training > graphic bar display.

– After selecting and confirming a training programme, the additional parameter settings for the training are modified via the +/– adjusting knob and confirmed by pressing the SET key.

+ Increasing the pre-setting values.

The settings values can be increased by turning the adjusting knob (+) to the right.

– Decreasing the pre-setting values.

The settings values can be decreased by turning the adjusting knob (–) to the left.

Reset

By selecting this function key the current display is deleted and reset.

Program

The different programme modes are selected via this function key.

| Pressing the key again | > | next programme |
| Holding the key | > | run through programmes |

RECOVERY

The recovery pulse function is set via this function key.

Pulse Measurement

The pulse measurement can be carried out in 3 places:

1. Ear Clip
   The plug is inserted into the socket and the hand pulse is switched off
2. Hand Pulse
   The connector is plugged in on the rear side of the display
3. Chest strap
   Please observe respective instructions.

Display

The display provides information about the various functions and the settings modes selected.

Programmes: Count up / Count down

The programmes are differentiated through their numbering systems.

Programmes:

Exertions over time or distance
Pre-set profiles 1-6

Pulse-driven programmes: HRC1/HRC2

Target pulse over time
Two programmes which regulate exertion through the pre-set pulse value.

Display values

The sample displays show operation as Crosstrainer.

With corresponding speed with the sample displays, the values for speed and distance are lower for crosstrainer and higher for exercise bike.

For 60 min^{-1} (**RPM**)

Crosstrainer:	=	9,5 km/h
exercise bike:	=	21,3 km/h

Training and Operating Instructions

Step Frequency

RPM ⌀ AVG min⁻¹

— Average Value (AVG)Dimension
— Dimension
— Values 0 – 199

Ⓖ

Speed

Average Value (AVG) — **SPEED** ⌀ AVG mph km/h
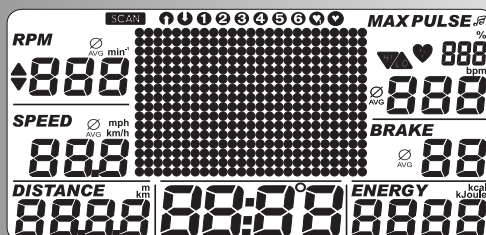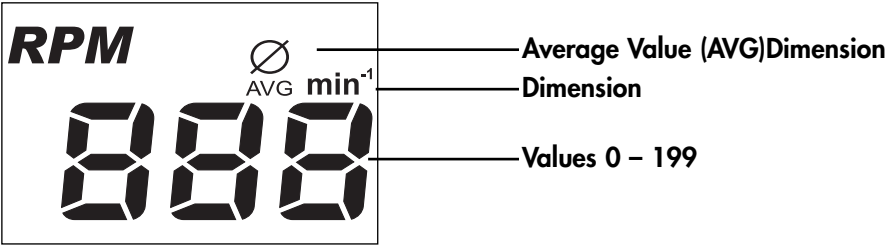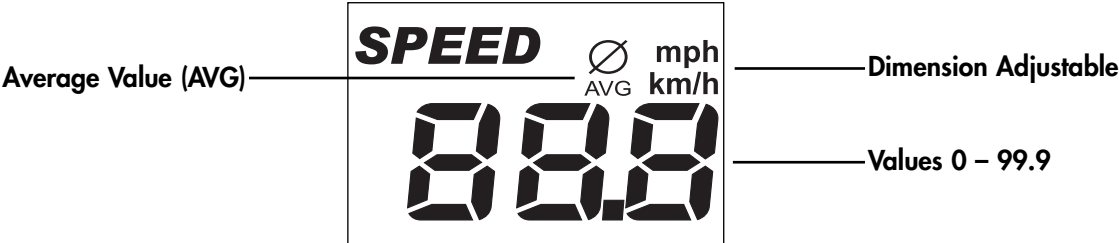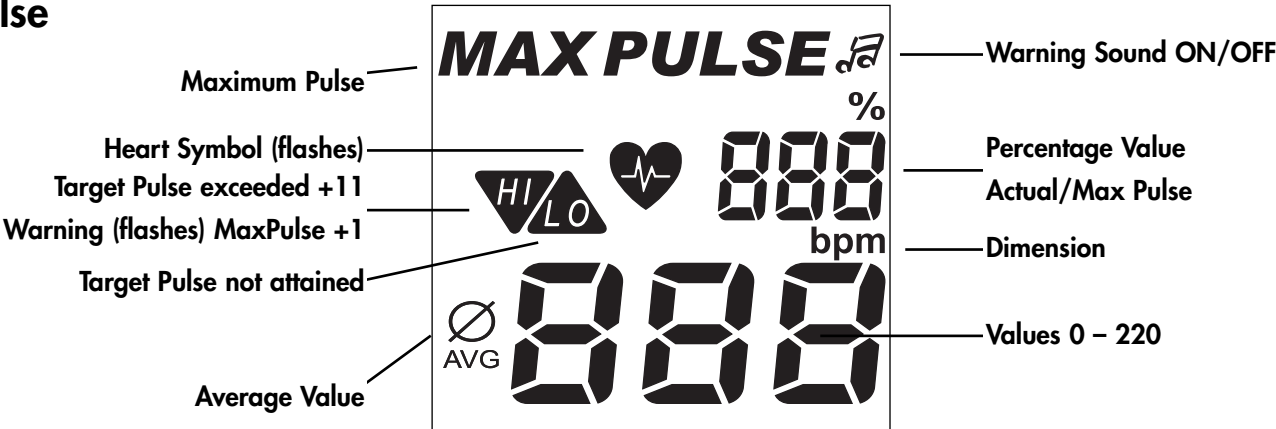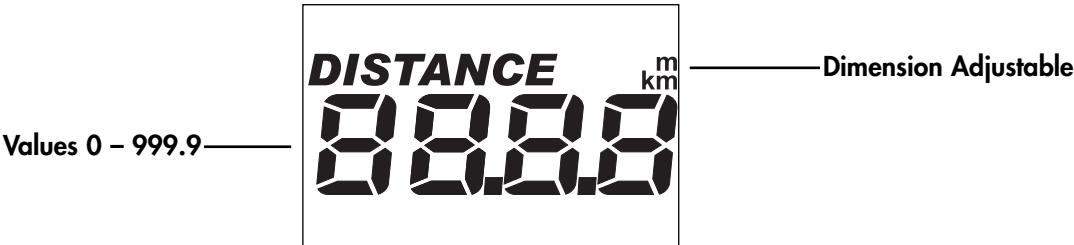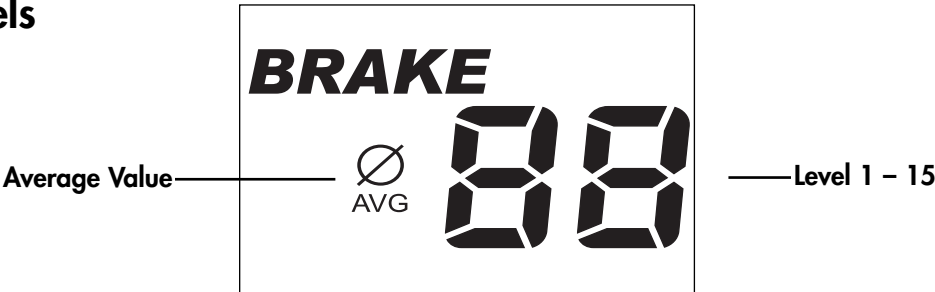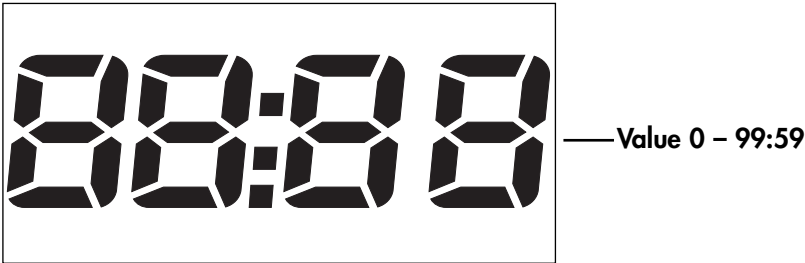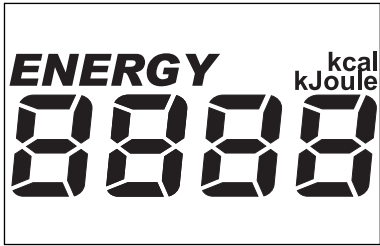
— Dimension Adjustable
— Values 0 – 99.9

Pulse

MAX PULSE ♫

Maximum Pulse —
Heart Symbol (flashes) —
Target Pulse exceeded +11 — HI LO
Warning (flashes) MaxPulse +1 —
Target Pulse not attained —
Average Value — ⌀ AVG

%
888

— Warning Sound ON/OFF
— Percentage Value
Actual/Max Pulse

bpm
888

— Dimension
— Values 0 – 220

Distance

DISTANCE m km

Values 0 – 999.9 — 8888

— Dimension Adjustable

Exertion Levels

BRAKE

Average Value — ⌀ AVG 88

— Level 1 – 15

Ⓖ

Time

88:88

— Value 0 – 99:59

Energy Consumption

ENERGY kcal kJoule ———— **Dimension Adjustable**

8888 ———— **Values 0 -9999**

Points

(G)

Exertion Profile

1 Point (Height) corresponds to 1 level

1 row level 1

Text and Value Display
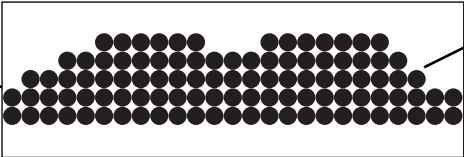
1 column corresponds 1 minute or 200 m or 0.1 miles

Exercise bike: 400 m or 0.2 mile

25 Columns

Quick Start (For Familiarisation)

Start of Training

Without special settings

- Welcome display on switch-on
  Display of total kilometres

- After 3 seconds: "Count Up" **Display**
  All values show 0
  Brake shows level 1
- Start of Training
- **Display**
  Speed, distance, energy, time, revolutions and exertion level and pulse (if pulse registration is active)

Changing the exertion during the training:
- **"+" display** value in the "Brake" window is increased in one-stage steps.
- **"–"** reduces it in one-stage steps.

Continuation of the training with this setting. Interim exertion changes are possible at all times.

End of Training

- Average Values (Ø): **Display**
  Speed, revolutions, exertion level and pulse (if pulse registration is active)
- Total Values
  Distance, energy and time

Snooze Mode

4 minutes after the end of training the machine switches into the snooze mode.
Press any key and display restarts with "Count Up".
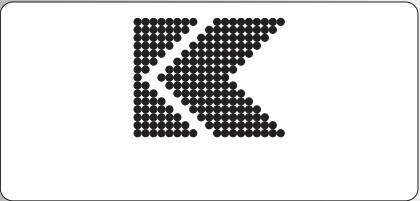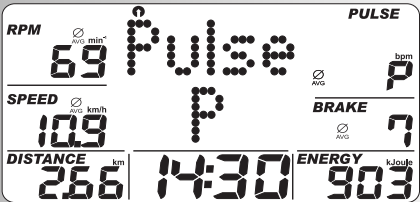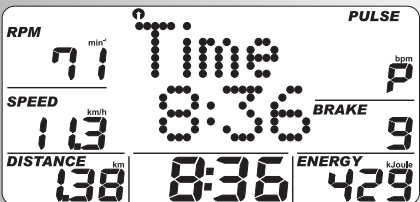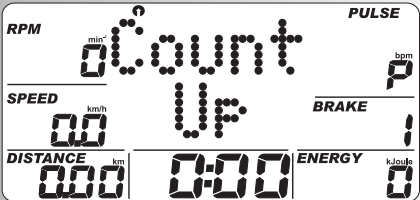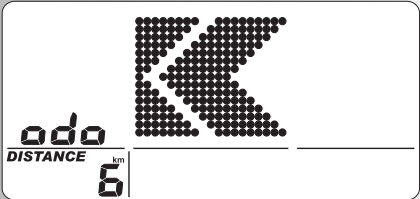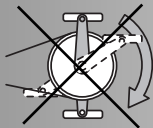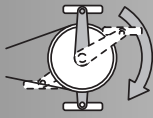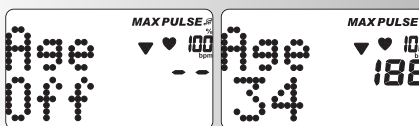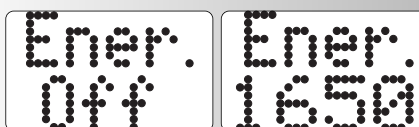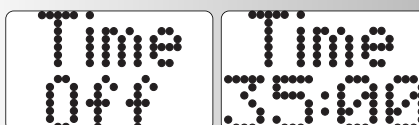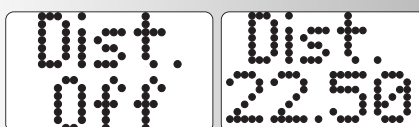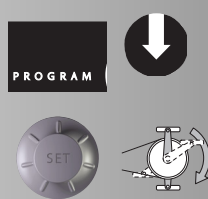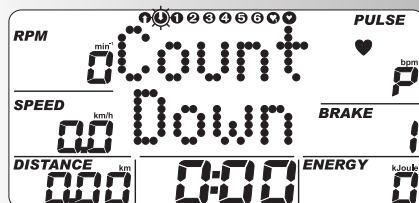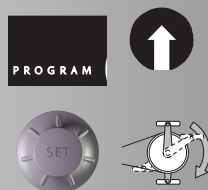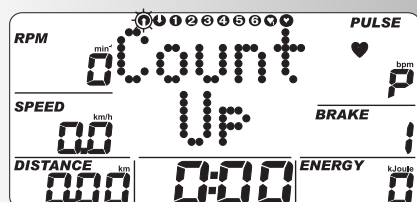
Training

The computer is supplied with 10 training programmes. They are clearly differentiated in their exertion intensity and stamina.

1. Training using exertion settings

a)Manual Exertion Settings
- (PROGRAM) "Count Up"
- (PROGRAM) "Count Down"

b)Exertion Profiles
- (PROGRAMS) "1" – "6"

2. Training Using Pulse Settings

Manual Pulse Settings
- (PROGRAM) "HRC1 Count Up"
- (PROGRAM) "HRC2 Count Down"

1. Training Using Exertion Settings

a)Manual Exertion Settings
(PROGRAM) "Count Up"
- Press "PROGRAM": Display "Count Up"
  Start the training. All values count upwards.

Or

- Press "SET": Settings Range
- "+" or "–": Change the exertion. Start of training. All values count upwards.

  (PROGRAM) "Count Down"
- Press "PROGRAM" : **Display** "Count Down"

The programme counts downwards from > 0 to the pre-set values. When no input occurs, the training starts the "Count Up" Programme.

To start the programme at least one input for time, energy or distance must be input.

- Press "SET": Settings Range

Settings Range
Display: Distance Setting "Dist."

Distance Setting
- Input with "+" or "–" values (e.g. 22,50)
  Confirm with "SET".

  Display: Next Menu Time Setting "Time"

Time Setting
- Input with "+" or "–" values (e.g. 35:00)
  Confirm with "SET".

  Display: Next Menu Energy Settings "Ener."

Energy Setting
- Input with "+" or "–" values (e.g. 1650)
  Confirm with "SET".

  Display: Next Menu Input Age - "Age"

Input Age
- Input with "+" or "–" values (e.g. 34)
  Confirm with "SET".

  Display: Next Menu Target Pulse "Fat 65%"

Target pulse (age-related)
- Make selection with **"+"** or **"−"**
- Fat burning 65 %, Fitness 75 %, Manual 40 - 90%
  Confirm with "SET" (e.g. Manual 40 -90 %)
- Enter values with **"+"** or **"−"** (e.g. Manual 83)
  Confirm with "SET" (end of default mode)
  Display: readiness for training with all defaults

or

target pulse (40 - 200)
- Deselect age entry with **"+"** or **"−"**. Display: "AGE OFF"
  Confirm with "SET".

Display: next default "Pulse Off" (target pulse)
- Enter value with **"+"** or **"−"** (e.g. 146)
  Confirm with "SET" (end of default mode)
  Display: readiness for training with all defaults

Comment

An overview of all settings options in the programmes is summarised in the tables.
(See page 28)

Training Programme is now ready

Exertion
- Change exertion with **"+"** or **"−"**
  Start of Training

b) Exertion Profiles (PROGRAM) "1" – "6"
All profiles are selected by pressing "PROGRAM"

e.g. **Display** "1"
Fitness Newcomer I. Exertion Level 1-4. 27 Min
Press "SET": Settings Range. For settings see table on page 28
Start of Training

- Press "PROGRAM" until **Display** "2"
  Fitness Newcomer II. Exertion Levels 1-5. 30 Min
  Press "SET": Settings Range. For settings see table on page 28
Start of Training

- Press "PROGRAM" until **Display** "3"
  Advanced I. Exertion Levels 1-6. 36 Minutes.
  Press "SET": Settings Range. For settings see table on page 28
Start of Training

- Press "PROGRAM" until **Display** "4"
  Advanced I. Exertion Levels 1-7. 38 Minutes.
  Press "SET": Settings Range. For settings see table on page 28
Start of Training
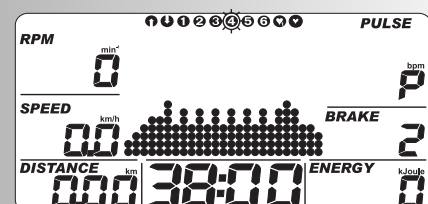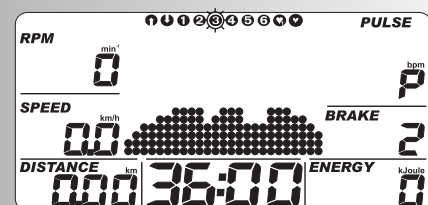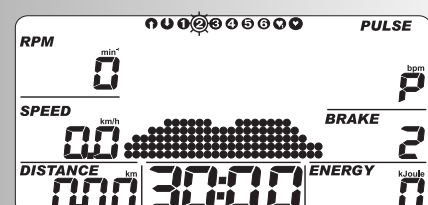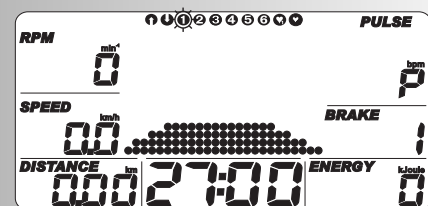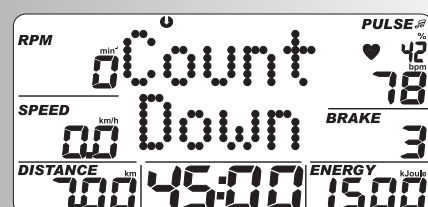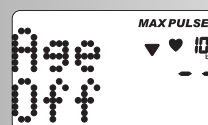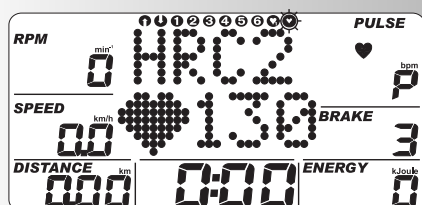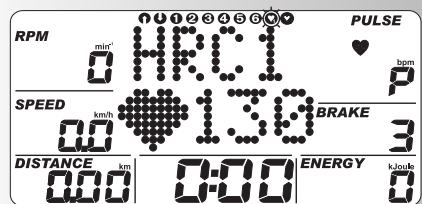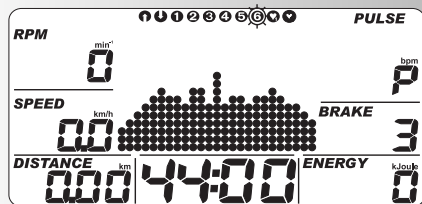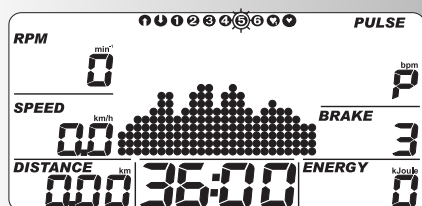
- Press "PROGRAM" until **Display** "5"
  Professional I. Exertion Levels 1-9. 36 Minutes.
  Press "SET": Settings Range. For settings see table
  on page 28

Start of Training

- Press "PROGRAM" until: **Display** "6"
  Professional I. Exertion Levels 1-10. 36 Minutes.
  Press "SET": Settings Range. For settings see table
  on page 28

Comment

For times over 25 minutes the programme view of the pro-
file is displayed in 25 condensed columns.

2. Training Using Pulse Settings

Manual Pulse Settings
(PROGRAM) "HRC1 Count Up"

- Press "PROGRAM" until **Display** "HRC1" (Count
  Up)
- Press "SET": Settings Range

  Start the training. All values count upwards.
  The exertion is automatically increased until the
  target pulse is achieved (e.g. 130)
  (PROGRAM) "HRC2 Count Down"

- Press "PROGRAM" until Display "HRC2" (Count Down)
- Press "SET": Settings Range

  The inputs and adjustment options are the same
  as the program point "Count Down".

  Start of Training
  The exertion is automatically increased until the target
  pulse is achieved (e.g. 130)

Comment

KETTLER recommends the pulse measurement to be carried
out with either ear clip or Chest strap in the HRC Program-
mes.
Move as far as possible at a constant RPM rate as other-
wise the pulse adjustment is negatively influenced.
Settings Options: (See table on page 28)
In HRC programs a power adjustment takes place for
deviations of +/– 6 heartbeats.

Training Functions

Change of Display during Training

Manual Adjustment
"PROGRAM" changes the display in the points field in the
following sequence:
Time / RPM / Speed / Dist. / Pulse / Brake / Ener. /
(Profile) / Time ...

Automatic Adjustment: (SCAN)
*Press the "PROGRAM" key for longer until the
"SCAN" Symbol appears in the display. The
display changes at a rate of 5 seconds. The
SCAN function is ended by pressing again on
the "PROGRAM" key, Recovery Function or
Training Interruption.*
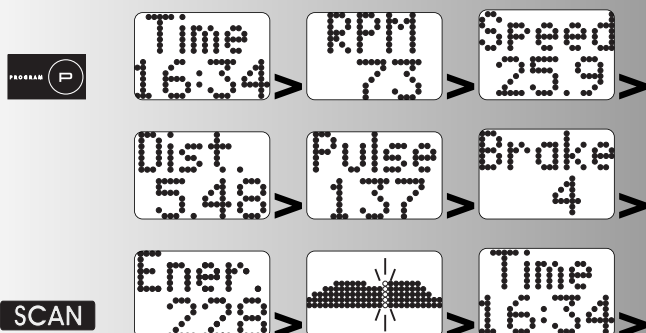
Training Interruption/End

If there are less than 10 pedal revolutions/minute or "RECOVERY" is pressed, the electronics recognise a training interruption. The training data achieved is displayed. Speed, exertion, revolutions and pulse are displayed as average values with the Ø -symbol with a **"+"** or **"−"** change in the current display, e.g. rest values. The training data is displayed for 4 minutes. If you do not press any keys during this period and do not train, the electronics switch into the snooze mode with the room temperature is displayed.

Training Resumption

If training is continued within 4 minutes the last values are counted further or downwards.

RECOVERY – Function

Recovery Pulse Measurement

At the end of training press "RECOVERY".

The electronics measure your pulse for the last 60 seconds retrospectively.

If you press "RECOVERY", the current pulse value is saved under "RPM" and the pulse value is saved after 60 seconds under "SPEED". "DISTANCE" displays the difference between the two values.
This results in a fitness mark (Example F 2.6). The display stops after 20 seconds.

"RECOVERY" or "RESET" interrupts the function

> **Comment**

If no pulse is recorded at the start or end of the time period, an error message is displayed.

Inputs and Functions
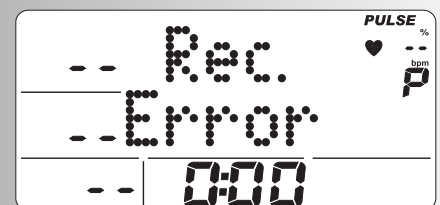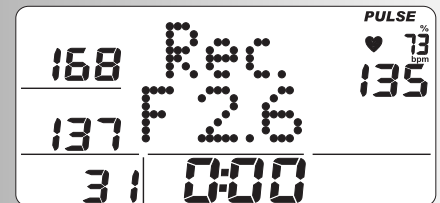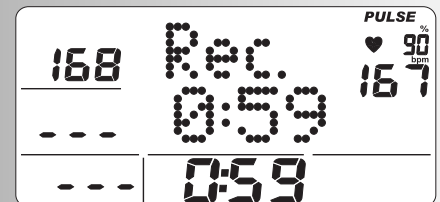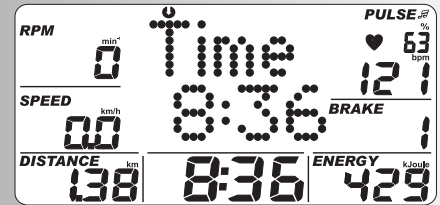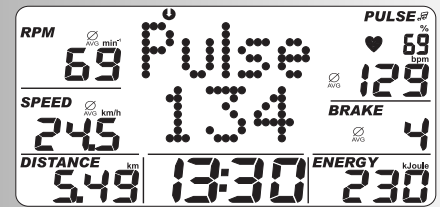
Training / At Rest	⬆	⬇	①	②	③	④	⑤	⑥	♥	♥♥
Exertion	✔	✔							*	*
↑↓ *Profile*			✔	✔	✔	✔	✔	✔		
Time		✔								✔
Energy		✔								✔
Distance		✔								✔
Max. Pulse	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
Fat Burn 65% or *Fitness* 75% or *Manual* 40-90%	✔	✔							✔	✔
Target Pulse 40-200	✔	✔							✔	✔
Time/Distance Switch			✔	✔	✔	✔	✔	✔		
® *Recovery*	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔

* Pre-Selection Exertion Level 1-10 prior to start of training

Programme Switch
Time / Distance

Time Mode 2700   Dist. Mode 540

For load profiles 1-6 only
- Set with **"–"** or **"+"** (time or distance mode)
  Confirm with "SET".
  Display: next menu "Age" (age entry)

The distance per column amounts to 0.2 km (0.1 miles)

Exercise bike: 0.4 km (0.2 miles)

Display for pulse events

					Overrun				
Value / Input			%	▼HI	▲LO	*MAX*	♪
Maximum Pulse 80-210			✔	+1		+1	+1
─ *AGE Off*							
Target Pulse	Fat Burn	**65%**					
ou	Fitness	**75%**	✔	+11	–11*		
ou	Manual	**40-90%**					
↳ *Target Pulse*	**40-200**			+11	–11*		

Comment: Only appears when the target pulse is achieved once.

If the training pulse input is not achieved (-11 beats) the "LO" symbol is displayed.

If it is exceeded (+11 beats) the "HI" symbol is displayed.

If the maximum pulse is exceeded the "HI" arrow flashes and the text "MAX" is displayed.

Adjustment of the Exertion Profile
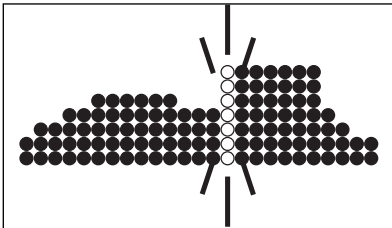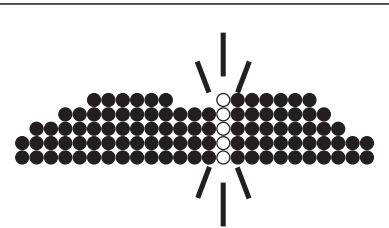
If the exertion is adjusted during the course of the programme, the change works from the flashing column on the right. The columns on the left show the output data achieved and remain unchanged.

Individual Settings

Proceed according to the accompanying diagram: Press "PROGRAM" and "RESET" together. Release the keys.
Display: All Segments
Now press "SET" for longer: Menu: Individual Settings

Display: RESET + / -

1. Deletion of the total kilometres
Press **"PRORGAM"** and **"RECOVERY"** are together
Function: Total kilometres are deleted
Press "SET": Jump to the next setting

Display: Energ.

2. Display of the energy consumption in kJoule / kCalorie
Using the „+/−" control knob, default values can
be adjusted.
Function: Select the energy consumption display
Press "SET": Selected unit is adopted and it jumps to the
next setting.

Display: Scale

3. Display of the unit in kilometres/miles
Using the „+/−" control knob, default values can
be adjusted.
Function: Select kilometre or mile display
Press "SET": Selected unit is adopted and it jumps to the
next setting.

Display: HRC Brake

4 Exertion Settings in the HRC-Programmes.
Using the „+/−" control knob, default values can
be adjusted.
Function: The initial exertion in the HRC Programmes can
be specified here from levels 1 to 10.

Press "SET": The displayed level is adopted and "Neu-
start" – New Start – appears on the display.
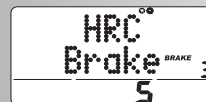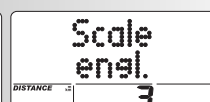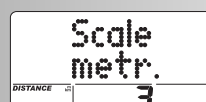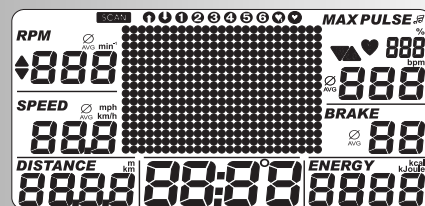
General Instructions

Exercise bike

Speed calculation
60 pedal rotations per minute result in a speed of 21.3 km/h.

Crosstrainer

Speed calculation
60 pedal rotations result in a speed of 9.5 km/h.

Fitness value calculation

The computer calculates and assesses the difference between load pulse and recovery pulse and your resulting "fitness value" on the basis of the following formula:

$$\text{Note } (\,\mathbf{F}\,) = 6 - \left(\frac{10 \times (\, P1 - P2\,)}{P1} \right)^2$$

P1 = load pulse   P2 = recovery pulse

Value 1 = very good   Value 6 = unsatisfactory

The comparison of load and recovery pulse is a simple and fast method to control your physical fitness. The fitness value is a value of orientation with regard to your ability to recover after physical load. Before you press the recovery pulse button and have the computer calculate your fitness value you should train in your load range for a longer time, this means for at least 10 minutes. With regular cardiovascular training you will notice that your "fitness value" will improve.

System Sounds

Switching On
On switch-on during the segment test a small sound is emitted.

Programme End
A programme end (profile programme, countdown) is indicated by a short sound.

Maximum Pulse Overrun
If the preset maximum pulse is exceeded by one pulse beat then 2 short sounds are emitted every 5 seconds.

Error Display
In the case of errors, e.g. a recovery can not be carried out without a pulse signal, then 3 short sounds are emitted.

Switch On/Off Automatic Scan Function
When activating and deactivating the automatic Scan Function, a short sound is emitted.

Recovery

In the function the oscillating weight is automatically slowed down. Further training is unsuitable.

Time/Distance Switch

In the programs 1-6, switchover from time to distance mode is possible in the default section.

The distance per column is
Exercise bike: 0.4 km (0.2 miles).
Crosstrainer: 0.2 km (0.1 miles)

Profile Display during Training

At the start the first column flashes. According to the flow it moves further to the right.

And in profiles over 25 minutes it reaches the middle (column

13). Then the profile moves from the right to the left. If the profile end appears in the last column (column 25), the flashing column moves further to the right until the end of the programme.

Average Calculation

The average value is calculated per training unit.

Instructions for Pulse Measurement

The pulse calculation starts when the heart flashes in the display in rhythm with your pulse rate.

With Ear Clip
The pulse sensor works with an infrared light and measures the translucency changes of your skin, which are caused by your pulse beat. Before you tuck the pulse sensor onto your earlobe, rub it 10 times forcefully to increase the blood circulation.

Avoid interference impulses.

- Fasten the ear clip carefully onto your ear lobe and find the most opportune moment for its removal (heart symbol flashes without interruption).
- Do not train directly under strong light e.g. neon lights, halogen lights, spotlights, beams or sunlight.
- Totally remove all vibrations and shaking of the ear sensor including cables. Always secure the cable with clips to your clothing or even better to a sweatband.

With Hand Pulse
The extra-low voltage generated through the contraction of the heart is recorded through the hand-sensors and assessed by the electronics.

- Always grip the contact areas with both hands.
- Avoid gripping jerkily.
- Hold the hands calmly and avoid contractions and rubbing on the contact areas.

With Chest strap
Observe the relevant instructions.

Failures in the pulse display

Should there once be any problems with pulse detection, please check the above mentioned points once again.

Comment

Only **one** way of pulse measurement is possible either with ear clip **or** hand pulse **or** Chest strap. If there is no ear clip or plug receiver in the pulse socket then the hand pulse measurement is activated. If there is contact between the ear clip/plug receiver in the pulse socket, then the hand pulse measurement is automatically deactivated. It is **not** necessary to remove the plug of the hand pulse sensors.

Faults in the Training Computer

Press the RESET Key

Training Instructions

Sports medicine and training science use ergometry, among other things, for the examination of the functional capability of heart, circulation and respiratory system.

You can find out whether or not you have achieved the desired effect from your training after several weeks using the following method:

1. You manage a particular endurance performance with less heart / circulation performance than previously

2. You sustain a particular endurance performance with the same heart / circulation performance over a longer period.

3. You recover more quickly than previously after a particular heart / circulation performance.

Guide values for the endurance training

Maximum pulse: maximum strain means the reaching of the individual maximum pulse. The maximum achievable heart rate is dependant on age.

Here, the following empirical formula applies: the maximum heart rate per minute corresponds to 220 heart beats minus age in years.

Example: age 50 years -> 220 – 50 = 170 pulse / min.

Load Intensity

Load pulse: the optimum intensity of load is reached at 65–75% (see also diagram) of the maximum pulse. This value changes depending on age.

Pulsediagramm
Fitness and Fat Burner

Maximalpulse (220 minus Age)
Fitnesspulse (75% of Max.Pulse)
Fat combustion pulse (65% of Max.Pulse)
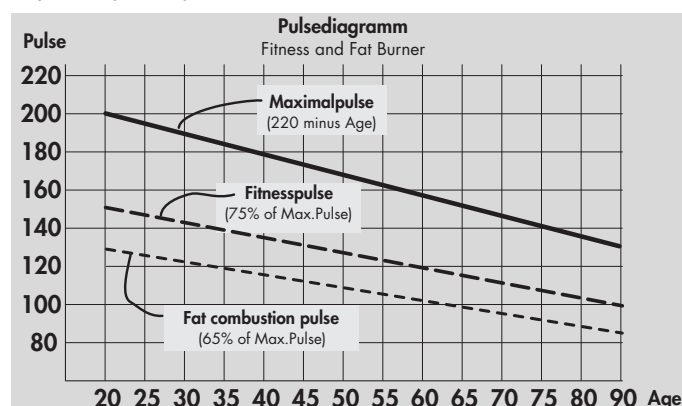
Extent Of Load

Duration of a training unit and its frequency per week:

The optimum extent of load is attained, if 65–75% of the individual heart / circulation performance is achieved over a longer period.

Empirical Formula:

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

The beginner's training can be planned as follows in the first 4 weeks:

Training frequency	Extent of training session
1st week	
3 times a week	2 minutes of training Break of 1 minute for physical exercises 2 minutes of training Break of 1 minute for physical exercises 2 minutes of training
2nd week	
3 times a week	3 minutes of training Break of 1 minute for physical exercises 3 minutes of training Break of 1 minute for physical exercises 2 minutes of training
3rd week	
3 times a week	4 minutes of training Break of 1 minute for physical exercises 4 minutes of training Break of 1 minute for physical exercises 3 minutes of training
4th week	
3 times a week	5 minutes of training Break of 1 minute for physical exercises 4 minutes of training Break of 1 minute for physical exercises 4 minutes of training

It is recommended that you perform approx. 5 minutes of exercises before and after every training unit, in order to warm up and cool down. There should be a training-free day between each two consecutive training units, if you prefer training sessions of 20-30 minutes 3 times a week later on in your training. Otherwise, there is no reason why you should not train daily.

Glossary

Recovery
Recovery pulse measurement at the end of the training. From start and end pulse of one minute the deviation and a fitness grade are determined. With the same training, the improvement of this grade is a measure for fitness increase.

Reset
Deletion of the display contents and restart of the display.

Programs
Possibilities for training, which require manual or program-determined loads or target pulses.

Profiles
Change of loads over time or distance represented in the points field.

Dimension
Units for display of km/h or mph, kjoule or kcal

Energy
Calculates the energy turnover of the body

Control
The electronic equipment controls the load or the pulse for manually entered or default values.

Points field
Display section with 25 x 16 points for representation of load and pulse profiles as well as text and value display.

Pulse
Recording of the heartbeat per minute

MaxPulse(s)
Calculated value from 220 minus years of age

Target pulse
Manual or program-determined pulse value, which is to be calculated.

Fat burning pulse
Calculated value of: 65 % MaxPuls

Fitness pulse
Calculated value of: 75 % MaxPuls

Manual
Calculated value of: 40 – 90 % MaxPuls

Age
Here an entry for calculation of the maximum pulse.

HI symbol
With "HI" displayed, a target pulse is too high by 11 beats. With HI blinking, the maximum pulse is exceeded.

LO symbol
With "LO" displayed, a target pulse is too low by 11 beats.

Menu
Display, in which values are to be entered or selected.

Glossary
Collection of attempts for explanation.

Performance table

Date	Restpulse	Stress pulse	Recovery pulse	Slope	Time (min)	Distance (km)	Energy consumption (Kcal)	Fitness	Mark

Date	Restpulse	Stress pulse	Recovery pulse	Slope	Time (min)	Distance (km)	Energy consumption (Kcal)	Fitness	Mark