KETTLER

UM6786/UM6787

Trainings- und Bedienungsanleitung
UM 678x

Training and Operating Instructions

(GB)

Table of Contents

Safety instructions

Please observe the following instructions for your own safety:

• The training device must be set up on an appropriate and firm surface.
• Inspect the connections for firm fitting before initial operation and additionally after approximately six operation days.
• In order to prevent injuries caused by wrong stress or overstress, the training device may only be used in accordance with the instructions.
• It is not recommended to permanently set up the device in humid rooms due to the resulting corrosion development.
• Assure yourself regularly that the training device functions properly and that it is in duly condition.
• The operator is responsible for the safety controls, which have to be carried out on a regular and proper basis.
• Defective or damaged parts must be exchanged immediately. Only use original KETTLER spare parts.
• The device may not be used until after repairs are completed.

• The safety level of the device can only be maintained provided that it is regularly inspected for damage and wear and tear.

For Your Safety:

• **Before starting the training, check with your GP that you are fit for training with this device. The doctor's findings should form the basis for the setup of your training programme. Incorrect or excessive training may damage your health.**
• **Systems to monitor your heart rate can be imprecise. Excessive training may result in serious damage to your health or death. Should you feel dizzy or weak, stop the training immediately.**

UM6786/UM6787

Brief Description

The electronics has an area of operation with buttons and a display
area (display) with changeable icons and graphics

Display Area

Display

Area of Operation

Buttons,
Rotary Switch (Encoder)
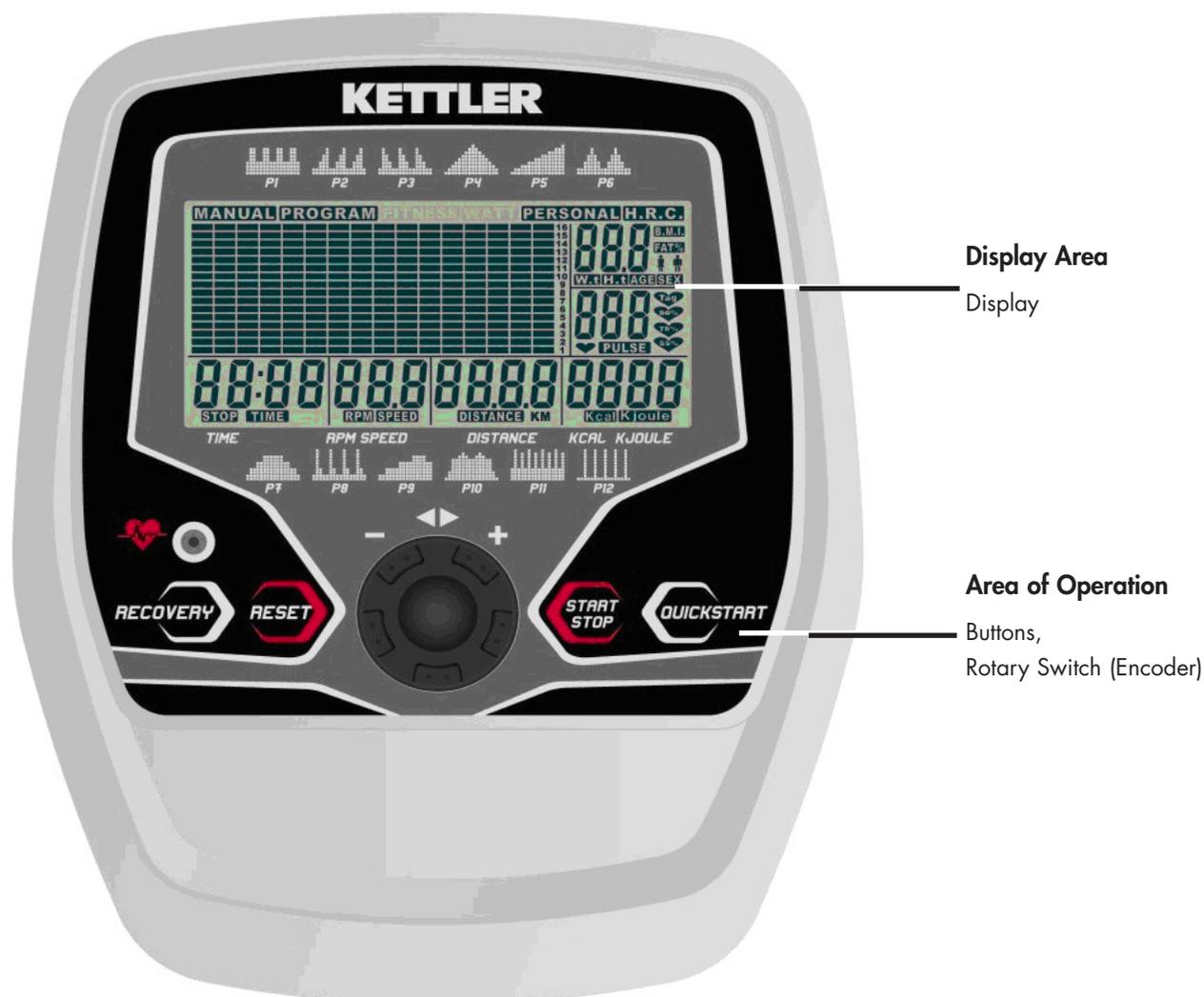
The electronics features the following functions:

• Memory and defaults for 4 people
• 4 training areas:
   MANUAL = manual load adjustment,
   PROGRAM = default profiles,
   PERSONAL = own profile,
   H.R.C. = pulse-controlled program
• Training defaults for saveable time, distance, energy consumption, pulse value monitoring
• Monitoring with visual and acoustic information
• Age-dependent target pulse
• Display of a fitness mark from 1 to 6, calculated with the recovery pulse value after 1 minute
• Motor-driven brake stage adjustment
• Own load profile can be saved
• Calculation of the energy consumption according to brake stage and cadence
• Selection of the display for energy consumption [Kjoule or Kcal]
• Temperature display in standby [°C]
• Integrated pulse receiver for uncoded chest strap e.g. T34 from POLAR

Trainings- und Bedienungsanleitung
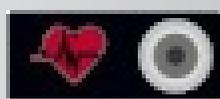
Brief Instructions

Area of Operation

The 5 buttons are briefly explained below.

All Buttons

• Display wakes up from standby mode

RECOVERY (recovery pulse with fitness mark)

With this function button, in the case of active pulse measure-
ment, the recovery pulse function is started and a fitness
mark determined.

RESET (press briefly) before the training

With this function button, the current display is cleared.

RESET (press for longer)

• Clear the display for a restart.

Encoder (turn right)

• In the case of selection: jumps one menu item further
• In the case of inputs: increases the input

Encoder (turn left)

• In the case of selection: jumps one menu item further
• In the case of inputs: reduces the input

Encoder (press briefly)

• The selection or input is adopted.
The next menu item is called up.

Encoder (press for longer)

• The training selection of the current person is displayed
again.

or

• The display is cleared with subsequent program or person
selection.

RESET + Encoder (at the same time)

• Conversion of the energy consumption from Kilojoules to Kilo-
calories

START STOP

• Start of training. The training time counts upwards.
• Training stop with STOP display. The training time is paused.
The average **Ø** of the brake stages is briefly displayed.

QUICK START

• "MANUAL" program is started. The training time counts
upwards.
Pulse Measurement
Your pulse can be measured using 3 sources:
1. Ear clip
2. Hand pulse sensors
3. Chest strap

Kjoule > Kcal > Kjoule

UM6786/UM6787

Display Area /Display

The display informs about the different functions.

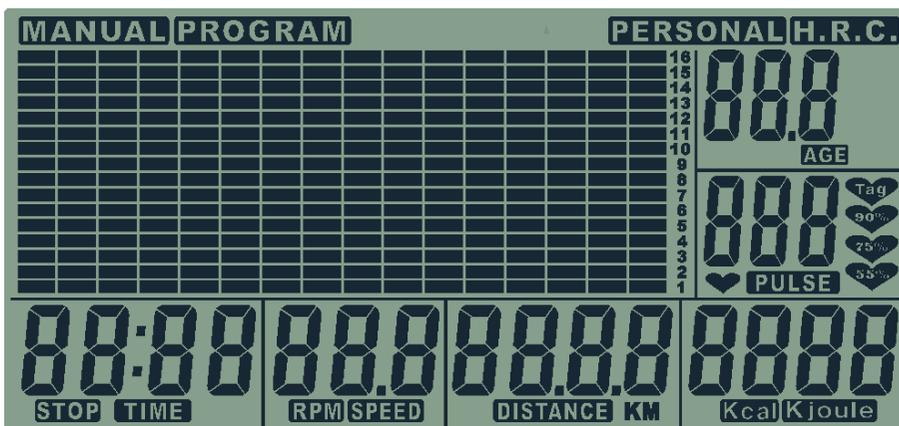**Program selection from 4 training areas**

MANUAL: The load stages are adjusted manually by the person training.

PROGRAM: 12 programs (profiles) adjust the load stages.

PERSONAL: Own profile adjusts the load stages

H.R.C.: The program for pulse training with the default of a training pulse

---

Load profile
Level = stage1-16
Start position = left

MANUAL PROGRAM
PERSONAL H.R.C.

16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1

88.8
AGE

888
Tag 90% 75% 55%
❤ PULSE

88:88 88.8 88.8 8888
STOP TIME   RPM SPEED   DISTANCE KM   Kcal Kjoule

Person (USER)
U0 = guest, U1-U4
AGE
Age: 10-99

PULSE
Pulse Display
40 - 220
55%, 75%, 90%, Tag
Calculated pulse values according to age

TIME
Training time
Display
0:00 > 99:59
99:00 > 0:00
STOP
Break
Interruption to training

RPM
Cadence
Display
14 – 199
SPEED
Speed
Display
- 99,9 km/h

DISTANCE
Distance
Display
0:00 > 99:59
99:00 > 0:00

Kcal Kjoule
Energy consumption
Display
0 > 9999
9990 > 0

Standby mode with temperature display

23°C
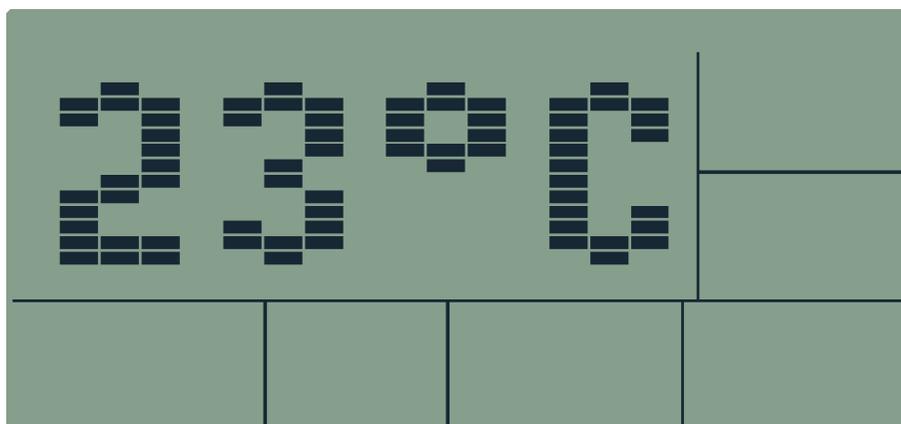
**The cadence in the instructions refers to a home trainer
60 rpm = 21.3 km/h.**

**In the case of a crosstrainer, the assignment is
60 rpm = 9.5 km/h**

Training and Operating Instructions
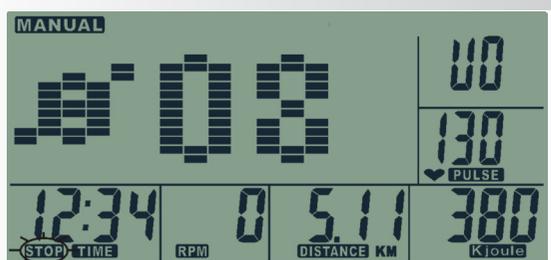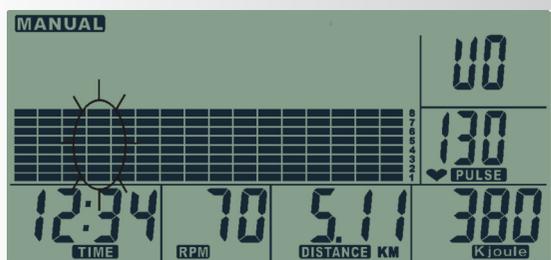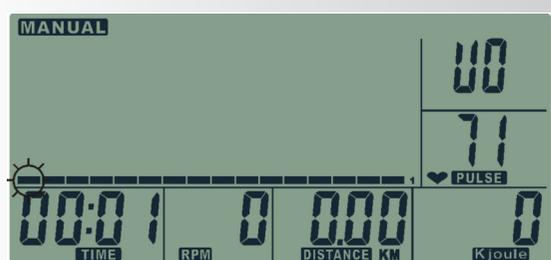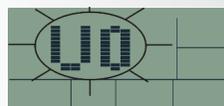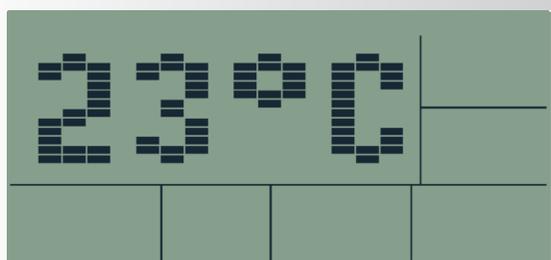
Quick Start (For Familiarising)

Quick Start:

Without Particular Settings
• Press "QUICKSTART".

Last user is displayed
or
Select person

"MANUAL" programme is started. The training time counts upwards.
• Pedal

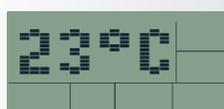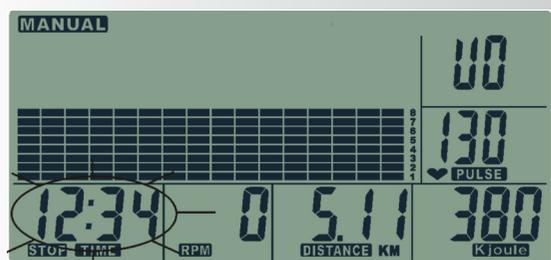Cadence, speed, distance and energy consumption count upwards. Pulse, if a pulse measurement is active.

The current bar changes every 15 seconds.

Changing Load

• "Encoder right"
Load is increased in single steps.
• "Encoder left"
Load is decreased in single steps.

Interruption to Training

• Press "START STOP"
The average value **(Ø)** of the load is briefly displayed. Cadence and speed display "0 values"
The **training time** TIME and STOP are displayed as flashing.

Continuing Training

• Press "START STOP"
• Pedal

or

End of Training and Standby Mode

The display switches to standby mode with temperature display 4 minutes after training has ended.

It is possible to continue the last training session if the display is reactivated by pressing a button or pedalling.

18
GB

UM6786/UM6787

MANUAL Training Area

(Manual Load Adjustment)

Flashing areas can be changed.

• Turn "Encoder" to change.

• Press "Encoder" to adopt.

Inputting Personal Data

• Actuate "Button" or "Encoder".

Last user is displayed as flashing.

Determine person

Adopt person (here, Person1)

Input age

From the age input, the target pulse value is calculated in the H.R.C program according to the relationship of 220 minus age.

Adopt age (here, 50)

Training Selection

Set MANUAL training area

Adopt MANUAL

Specifying Training Values

Skip load (brake stage) or determine and adopt load (here; stage 8)

Skip training time or determine and adopt training time

(here, stage of 20:00 minutes)

The set training time is converted to 16 profile bars. If no time is specified, the current bar changes every 15 seconds.

Skip distance or determine and adopt distance

(here, 7.00 km)

Skip energy consumption or determine and adopt energy consumption

(here, 300 Kjoules)

Skip pulse value or determine and adopt pulse value

Again, training time, etc. (here, 130 strokes/min)

Training

• Press "START STOP"

• Pedal

Defaults for time, distance, energy consumption count downwards. In the case of active pulse measurement, the pulse is monitored and the value flashes if it is exceeded as a warning.

Changing Load

• "Turn Encoder right or left"

Load is increased or reduced

Interruption to Training

• Press "START STOP"

The average value (Ø) of the load is briefly displayed.

Cadence and speed display "0 values".

 The training time and STOP are displayed as flashing.

Continuing Training

• Press "START STOP"

• Pedal

19
GB

Training and Operating Instructions

If a **default** is reached (0 value flashes, 8 signal tones), the display shows **interruption to training** with flashing **time display** and **STOP.** The default values are displayed again. With the **"START STOP"** button and pedalling, the display is active again until the next default is reached.

PROGRAM Training Area

Selection from 12 programs (profiles) which automatically adjust the load stages.

Input or confirm personal data

Select PROGRAM

Selection from 12 programs

(Here, P1)

Specifying Training Values

Skip training time or determine and adopt training time
(Here, 16:00 minutes)

The set training time is converted to 16 profile bars. In the case of 16 minutes, one bar corresponds to 1 minute. If no time is specified, the current bar changes every 15 seconds.

Skip distance or determine and adopt distance

Skip energy consumption or determine and adopt energy consumption

Skip pulse value or determine and adopt pulse value

Again, training time, etc.

Training

• Press "START STOP"

• Pedal

Defaults for time, distance, energy consumption count downwards. In the case of active pulse measurement, the pulse is monitored and the value flashes if it is exceeded as a warning.

Changing Load

• "Turn Encoder right or left"

Load is increased or reduced
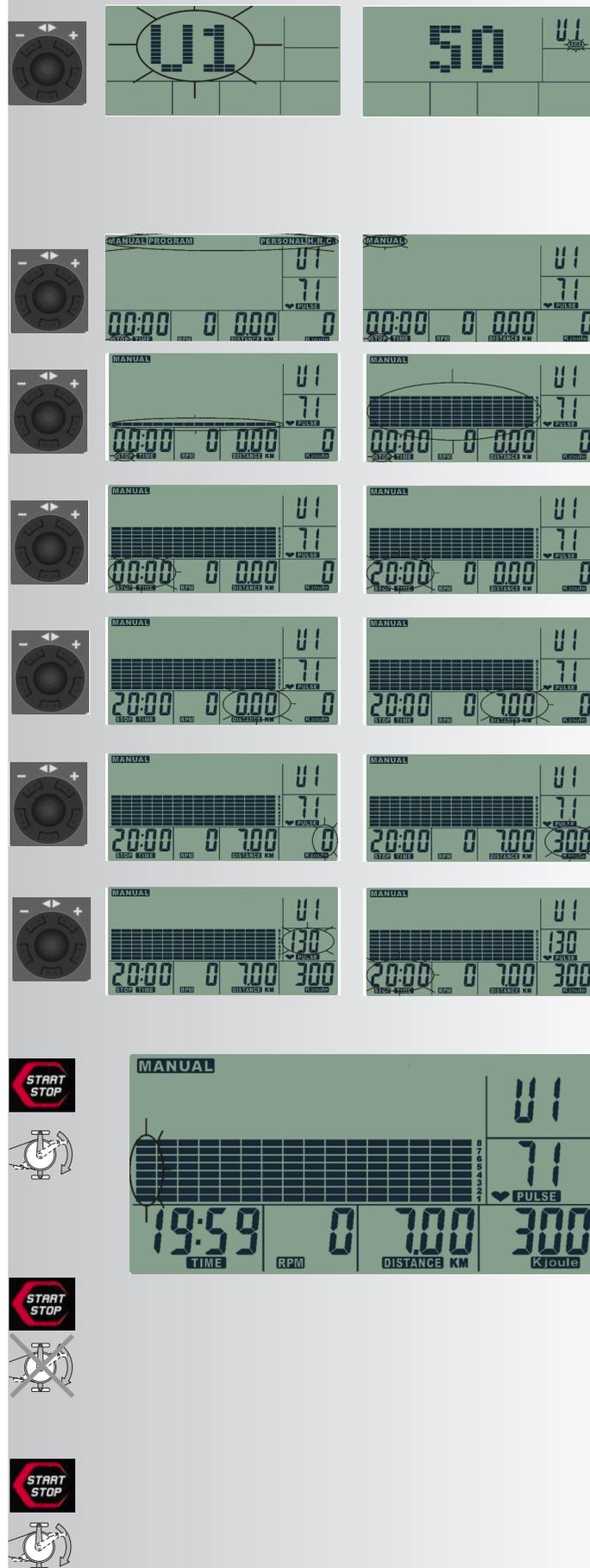
Interruption to Training

• Press "START STOP"

The average value (Ø) of the load is briefly displayed.

Cadence and speed display "0 values".

The training time and STOP are displayed as flashing.

Continuing Training

• Press "START STOP"

• Pedal

UM6786/UM6787

PERSONAL Training Area

Create and train own profile
Input or confirm personal data
Select PERSONAL

There are 2 options: Creating the profile before training or during training.
Creating Profile Before Training

The first profile bar flashes and can be changed.
• Turn "Encoder" to change.
• Press "Encoder" to adopt the load and jump to the next bar

• Press "Encoder" **for longer** (doing this saves the profile)

Training time flashes and can be changed. (Here, 16:00 minutes). The set training time is converted to 16 profile bars. In the case of 16 minutes, one bar corresponds to 1 minute. If no time is specified, the current bar changes every 15 seconds.

Skip distance or determine and adopt distance

Skip energy consumption or determine and adopt energy consumption

Skip pulse value or determine and adopt pulse value

Again, training time, etc.

Training

• Press "START STOP"
• Pedal

Defaults for time, distance, energy consumption count downwards. In the case of active pulse measurement, the pulse is monitored and the value flashes as a warning if it is exceeded.

Creating Profile During Training

The first profile bar flashes and can be changed.
• Press "Encoder" **for longer**

Training time flashes and can be changed. (Here, 16:00 minutes)

Training

• Press "START STOP"
• Pedal
• "Turn Encoder right or left"

Load is increased or reduced

When jumping to the next bar, the stage is saved. If the **time default** is reached (0 value flashes, 8 signal tones), the display shows **interruption to training** with flashing **time display** and **STOP**. The default values are displayed again. The profile is saved.

With the **"START STOP"** button and pedalling, the display is active again.

| Comment: |

When the **PERSONAL** training area is called up, the own profile is displayed.
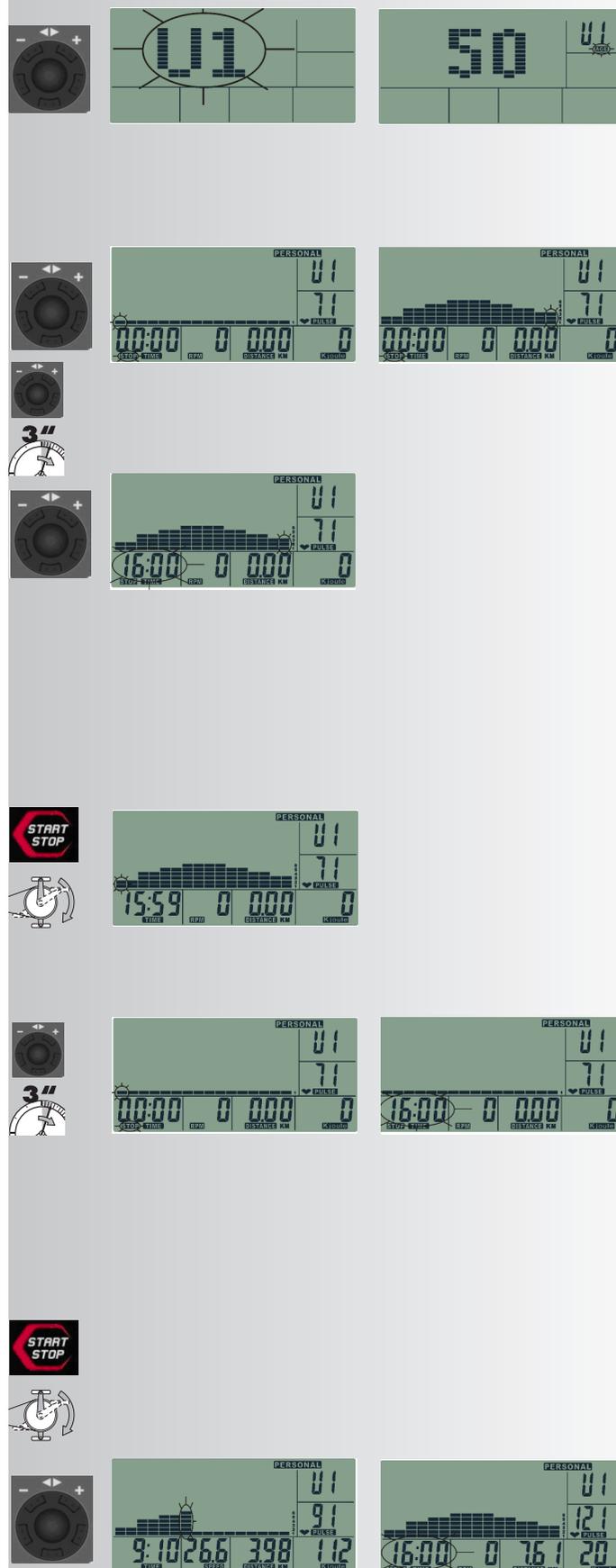
Training and Operating Instructions

H.R.C Training Area

Pulse-Controlled Program

If the current pulse is lower than the target pulse, the load is increased by one stage following 30 seconds. If it is higher, the load is reduced by one stage following 15 seconds.

Input or confirm personal data

Select H.R.C.

Specifying Target Pulse

There are 4 target pulse values, with 55%, 75%, 90% and Tag, to choose from. The pulse values to be displayed are calculated from the relationship of 220 minus the input age. In the case of 50 years, in the case of 55% = 96, 75% = 132, 90% = 158, Tag = 170 is displayed.

The **"Tag"** value can be changed.

55% flashes and can be changed.

• Turn "Encoder" to select the target pulse.
• Press "Encoder" to adopt the target pulse.

In the case of Tag, the value flashes and can be changed.

After specifying the target pulse, the pulse selection icon is displayed together with the current pulse.

Training time TIME flashes and can be changed. (Here, 16:00 minutes).

Skip distance or determine and adopt distance

Skip energy consumption or determine and adopt energy consumption

Again, training time, etc.

Training

• Press "START STOP"
• Pedal

The first profile bar flashes and moves to the right during training.

Defaults for time, distance, energy consumption count downwards.

The load stages are increased until the target pulse is reached.

| Comment: |

If the pulse measurement fails during the H.R.C. program, the load is reduced to stage 1 within 60 seconds.

If the stage 1 remains unchanged for 30 seconds, brief signal tones are output and the display shows interruption to training with flashing STOP

RECOVERY Recovery pulse stage

The RECOVERY function can be used after each exercise program.

The RECOVERY button is used to initiate recovery pulse measurement at the end of exercising. Initial and final pulse during one minute are used to calculate deviation and a fitness score. In case of equal exercising, improvement of such score is a measurement for increase of fitness.

When reaching the target values, end exercising and press the RECOVERY button; then, leave your hands at the hand pulse sensors. In case of previous pulse measurement, the display shows 00:60 for time, and the PULSE display shows the current pulse value (flashing). The countdown starts at 00:60. Leave your hands at the hand pulse sensors until the countdown reaches >0<. The display will show on its right a value between F1 and F6. F1 is the best status; F6 is the worst status. The function can be ended by pressing again RECOVERY.

If no pulse is recorded during the time delay, the error message **"Err"** appears.
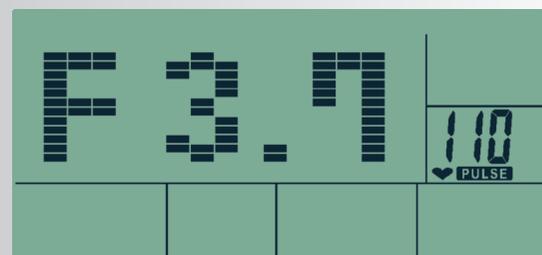
End of Training and Standby Mode

The display switches to standby mode with temperature display 4 minutes after training if there are no longer any buttons being pressed, no pulses arise owing to pedalling and no pulse is active.

It is possible to continue the last training session if the display is reactivated by pressing a button or pedalling.

UM6786/UM6787

Training and Operating Instructions

General information

System signals

Activation of the device

If you activate the device, a signal is emitted during the segment test.

Presetting

A short signal is emitted, if you reach a presetting like time, distance and KJoule/kcal.

Exceeding of maximum pulse

If the set maximum pulse is exceeded by one pulse beat, two short signals are emitted for the time of exceedance.

Calculation of fitness score

The computer calculates and assess the difference between the training and recovery heart rate and the resulting "fitness score" according to the following formula:

$$\text{Score (F)} = 6 - \left(\underline{10 \times (P1 - P2)} \right)^2$$

P1 = Training pulse   P2 = Recovery pulse

Score 1 = very good   Score 6 = poor

A comparison of the training and recovery heart rate is a quick and easy way in which to determine physical fitness. The fitness score is an orientation value to asses your recovering ability after physical exercise. Before pressing the recovery heart rate button and determining your fitness score, you should train at your own level of intensity for a significant period of time e.g. 10 minutes. For regular cardiovascular training you will discover that your "fitness score" improves.

Possibilities for Pulse Measurement

The pulse measurement starts as soon as the heart in the display blinks in time with your pulse beat.

With hand pulse

An extra-low voltage caused by the contractions of your heart is registered by the hand sensors and evaluated by the electronics assembly of the device.

• Always grab the contact faces with both hands.
• Avoid jerky grasping.
• Hold your hands calmly and avoid contractions and rubbing on the contact faces.

With ear clip

The pulse sensor works with infrared light and measures the variations in translucence in your skin, which are produced by your pulse beat. Rub your ear ten times strongly to activate the blood circulation before attaching the pulse sensor to your earlobe.

Avoid disturbing pulses.

• Attach the ear clip properly to your earlobe and look for the best point for the measurement (heart symbol blinks without interruption).
• Do not train directly under strong incidence of light, e.g. neon light, halogen light, spotlight, sun light.
• Completely eliminate any shocks or bounces of the ear sensor and the cable. Always attach the cable with a clip at your clothing or, even better, at your headband.

With breast clip

The internal pulse receiver is compatible to un-coded POLAR chest strap transmitters. For coded systems, wrong pulse values may be displayed. We recommend T34 by POLAR. Please observe the corresponding instructions.

A plug-in receiver is not necessary and should not be used for technical reasons.

Comment:

Only one way of pulse measurement is possible: either with ear clip or with hand pulse or with breast belt. If no ear clip is located in the pulse plug, hand pulse measurement is activated. If you insert an ear clip in the pulse plug, hand pulse measurement is automatically deactivated. It is not necessary to disconnect the plug of the hand pulse measurement.

Faults in the Training Computer

If the computer display is not functioning correctly, please remove the power supply and switch off the machine.

Training Instructions

This device has particularly been designed and developed for leisure time sportsmen. It is excellently suited for cardio-vascular training.

The training methodically has to be organised on the principles of stamina training. This will predominantly cause changes and adaptations of the cardiovascular system. This includes the reduction of the resting pulse frequency and of the load pulse.

This gives the heart more time for filling the ventricles and for the blood circulation of the cardiac musculature (through the coronary vessels . Moreover, depth of breathing and the volume of air that can be breathed in (vital capacity) are increased. Further positive changes take place in the metabolic system. In order to achieve these positive changes, the training has to be planned according to certain guidelines.

Planning and control of your training

The basis for your training planning is your current physical fitness condition. Your family doctor can diagnose your personal fitness by means of an exercise tolerance test, which will constitute the basis for your training planning. If you have not undergone an exercise tolerance test, high training exertion and/or overstraining must be avoided in all cases. The following rule should be considered in your planning: stamina training is controlled via the scope of exertion as well as via the level / intensity of exertion.

Regarding exertion intensity

The intensity of exertion should preferably be checked in your fitness training via your heart's pulse rate. The maximum heart rate per minute of > 220 minus age must not be exceeded. The optimum training pulse is determined by age and training target.

Training target: fat burning/weight reduction

The optimum pulse frequency is calculated using the empirical formula (220 – age) x 0.65.

Advice: fat burning for energy supply only gains significance after a minimum training period of 30 minutes.

Training target cardio-vascular fitness:

The optimum pulse frequency is calculated using the empirical formula (220 – age) x 0.75.

The intensity is predetermined in your training by means of the braking levels, ranging from 1-16. As a beginner, you should avoid too high braking level settings for your training, as this will quickly lead to exceeding the recommended pulse rate range. Start by using a low braking level setting and then approach your optimum training pulse step by step. Do not forget to regularly check during your fitness training whether you still range within the intensity area according to the above stated recommendations.

Sports physicians consider the following load factors to be positive for fitness:

Frequency	Duration	
daily	10	min
2-3 times weekly	20-30	min
1-2 times weekly	30-60	min

Beginners should not start with training units of 30 to 60 minutes.
A beginner training could be organised as follows during the first four 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

In order to have a personal training documentation, you can enter the training values achieved in the performance table.

Prior to and after every training unit gymnastic exercises lasting approx. 5 minutes serve the warming up and/or cooling down. There should be a day without training between two training units, if you later on prefer to train three times a week for 20 - 30 minutes each. Otherwise nothing can be said against a daily training.

Pulse

Pulsediagramm
Fitness and Fat Burner

220
200
180
160
140
120
100
80

Maximalpulse
(220 minus Age)

Fitnesspulse
(75% of Max.Pulse)

Fat combustion pulse
(65% of Max.Pulse)

20 25 30 35 40 45 50 55 60 65 70 75 80 90 **Age**

Leistungstabelle

| – GB – | Performance table | | – F – | Tableau de performances | | – NL – | Prestatientabel |
| – E – | Table de rendimiento | | | | | | |

– D –	Datum	Ruhepuls	P 1 Belastungspuls	P 2 Erholungspuls	Belastungs-stufe	Zeit (min.)	Entfernung (km)	Energie-verbrauch	Fitness-note
– GB –	Date	Restpulse	Stress pulse	Recovery pulse	Slope	Time (min)	Distance (km)	Energy consumption (Kcal)	Fitness Mark
– F –	Date	Pouls au repos	Pouls en change	Pouls de récupération	Ange d'inclination	Temps (mn.)	Distance (km)	Dépense d'énergie (Kcal)	Note
– NL –	Datum	Rustpols	Belastingspols	Ontspanningspols	Hellingshoek	Tijd (min.)	Afstand (km)	Calorieenverbruik (Kcal)	Waard. cijfer
– E –	Fecha	Pulso en reposo	Pulso bajo esfuerzo	Pulso de recuperación	Escalón de carga	Tiempo (min.)	Distancia (km)	Consumo de energia (Kcal)	Nota

KETTLER