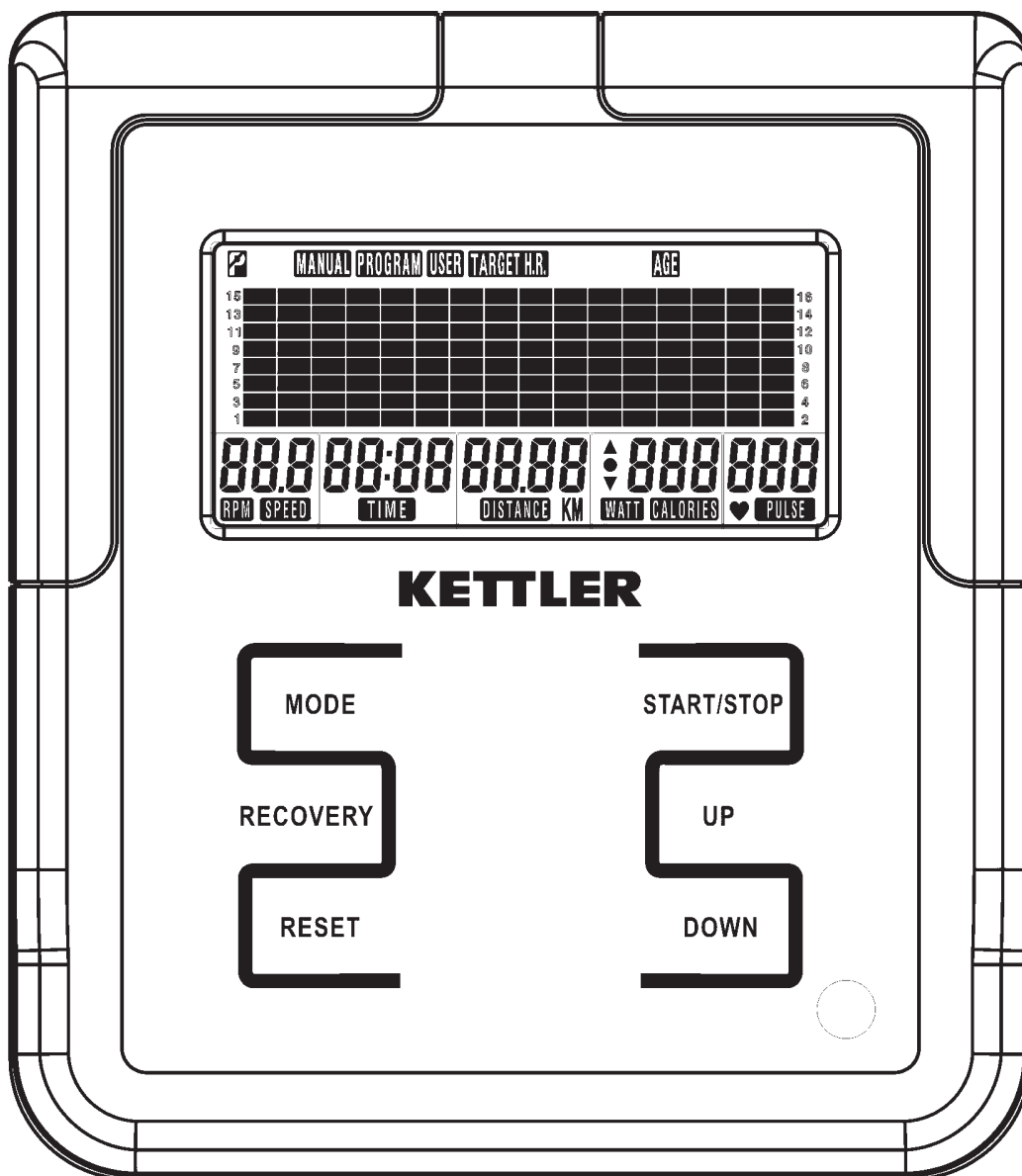


KETTLER

Computer- und Trainingsanleitung SM 8820 – 83



- D
- GB
- F
- NL
- E
- I
- PL
- P
- DK



FREIZEIT MARKE KETTLER

Operating Instructions for the training computer with digital display

1. Start Without Previous Knowledge

You can start your training without requiring any previous knowledge. The necessary information will be displayed in your display. For effective training and for setting your personal training defaults, please read and follow these operating instructions.

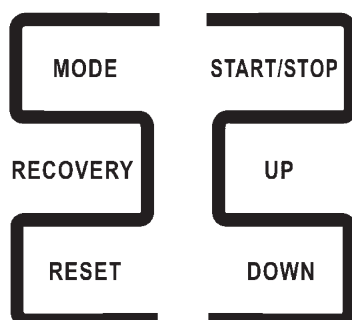
Read also the general tips in the training instructions.

After switching on the unit (mains connection or starting via RESET, the complete display information will appear = segment test with an audible signal. Afterwards, the time is shown briefly. Time can be adjusted via the UP and DOWN keys: First, set hours UP / DOWN, then confirm via MODE, then set minutes, and confirm time setting again via MODE. Afterwards the user display (U 1-4) U = USER will appear.

Data for up to 4 different users can be stored which can be retrieved upon restart. The individual training can be continued by 4 different people with their personal data being stored over a longer period of time.

You can select your user memory via the UP or DOWN keys and confirm your choice via the MODE key.

2. Function Keys



START / STOP

Via this key, you start your training without any pre-setting, or after entering certain default values and/or selection of one of the automatic training programs. Pressing this key again causes the computer to stop the counting function. Settings can be changed without interrupting your training. If START is pressed again, the computer starts counting again after the new setting has been fixed.

MODE

In order to display information or to input your personal settings, choose between the functions [TIME, DISTANCE, CALORIES and PULSE] by briefly pressing the MODE key.

DOWN / UP

- the default values are set via the DOWN or UP keys. To this end, the unit must be in a STOP position; > top left symbol will blink.
- During your training, you can reduce or increase the overall performance range via these keys > graphic display.

- In the pre-selection, the desired user setting (USER) can be selected via DOWN or UP.
- The training program selection (MANUAL, PROGRAM, USER or TARGET H.R.) is also carried out via the DOWN or UP keys.

DOWN downward setting of default values.

By briefly pressing the DOWN key, you reduce the setting values of the various functions > [TIME, DISTANCE, CALORIES and PULSE]. If you press the DOWN key for a longer period of time, the setting value can be reached in a faster counting sequence.

UP upward setting of default values.

By briefly pressing the UP key, you increase the setting values of the various functions > [TIME, DISTANCE, CALORIES and PULSE]. If you press the UP key for a longer period of time, the setting value can be reached in a faster counting sequence.

RESET

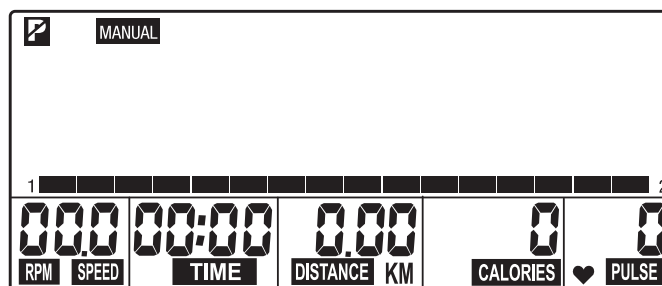
By briefly pressing the RESET key, you reach the selection of the different training program settings > top bar in the display [MANUAL, PROGRAM, USER, TARGET H.R.]

Keeping the RESET key pressed causes the computer to restart: time setting and user selection (U1-4)

RECOVERY

With the RECOVERY key, you reach a recovery pulse measurement at the end of the exercise session.

3. Display Information



General: the display is divided into three fields:

1. In the top line, the status or selection of the training program and the status symbol for age are displayed.
2. The large display area represents the graphic display of the performance range (route profile) and serves for simple orientation within the training sequence. One bar segment = low performance; eight bar segments on top of each other = maximum performance. The braking levels are shown next to the bar display, on the left as odd numbers (1, 3,..., 15) and on the right as even numbers (2, 4, ..., 16).
3. In the bottom display area, several segment displays can be found next to each other where the different training functions are shown. If these functions are pre-set, the respective function description will blink > e.g. TIME.

After finishing your training, the training data is stored and can be retrieved when starting a new training sequence. The new data is then added.

Training program (top display line)

The different training programs are chosen by pressing the RESET key and then selected via the UP or DOWN keys. Afterwards, the selection must be confirmed via MODE. The differences in the programs are defined as follows:



MANUAL PROGRAM USER TARGET H.R.

MANUAL Manual training

This setting is selected for a simple training sequence.

The route profile remains linear and can be increased or reduced during your training via the UP or DOWN keys.

PROGRAM Pre-set programs for training

Here, 6 factory pre-set training programs are available. By means of the route profile you can see the difficulty level of each setting.

USER training program via user setting (User)

This program selection allows to you set your individual route profile. At least one default value must be selected > [TIME, DISTANCE, CALORIES or PULSE].

TARGET H.R. Training by means of target heart rate (THR)

In this program, setting the performance is controlled by the pre-set heart rate. To this end, your pulse must be registered during your training.

See > 6. Possibilities for pulse measurement

Default values (bottom display line)

The bottom display line includes individual segment displays with various default values and units.

RPM / SPEED (left)

Speed

This alternating display (display interval of 6 seconds) presents the step frequency as RPM (Round per minute = revolution per minute) and the speed as SPEED in km/h. Display range: min. 0.0 to max. 99.9 km/h



TIME (2nd on the left)

Training period

In this display, the training period is measured in minutes and seconds. Display range: min. 00:00 to max. 99:00



DISTANCE (centre)

Training distance

The covered distance is measured in km. The counting of the distance starts with >0< and can be continued up to a maximum of 99.99 km. Gradation for counting is effected in intervals of 0.01 km = 10 m.



CALORIES (2nd on the right)

Calorie and energy consumption

This display shows the calculated calorie consumption. The value is established during the training by means of the resistance and time measurements. Display range: min. 0 to max. 990



The data only serves as a rough guideline when comparing the different exercises and cannot be used for medical purposes.

PULSE (right)

Pulse / heart rate

If the pulse is measured during training, the heart symbol in this segment display will blink and the pulse rate displayed as heartbeats per minute. Display range: min. 30 to max. 240.

If the target pulse rate is reached during your training, the computer will send an alarm signal.



Sleep Mode (empty)

If no RPM or PULSE is registered or if no manual settings are made within 4 minutes, the unit will switch to sleep mode.

4. Personal Training Defaults

General

- Without any special pre-settings, the values in the individual defaults [TIME, DISTANCE, CALORIES and PULSE] count upwards, starting from >0<.
- For effective training it is sufficient to only set one target value in one of the defaults [TIME, DISTANCE, CALORIES or PULSE].
- If a personal target value is set as a training default, the computer will count downwards from this value. When reaching the target value >0<, an audible signal will sound. If the training is continued after this -without setting a new target value - the computer will again count downwards from the pre-set value in this mode on the pressing of the START key.
- Once set, target values cannot be changed during your training. They can only be changed if you press the STOP key first.

Target default value

Setting a target value is identical for all defaults:

e.g. DISTANCE

- Press the MODE key until the designation >DISTANCE< is blinking in the display segment.
- By pressing the UP key briefly, you increase the value, e.g. DISTANCE in 0.1 km intervals. If you keep the UP key pressed, the setting value is counted more quickly.
- If you want to reduce the target value again, press the DOWN key briefly (or long). The value is again counted downwards.
- If you have set the target value, press the MODE key. The value is then stored in this function and you reach the next function, e.g. CALORIES.
- If possible, enter only one default value, as otherwise the training targets will overlap. For example, you might reach



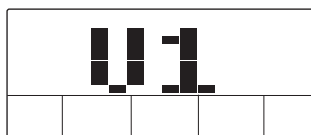
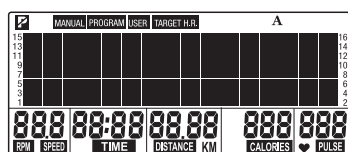
- the pre-set target time earlier than the pre-set target distance.
- The other defaults [TIME, CALORIES or PULSE] are also entered as described in items 1-4 via the keys SET, RESET and MODE.

After having finished setting your defaults, you can start your training. During the training, all current values are displayed in parallel next to each other. The pre-set value is counted downwards until >0< is reached.

5. Training

After switching on the unit (see chapter 1) and selecting the user (U 1–4), the program line in the top display area will blink.

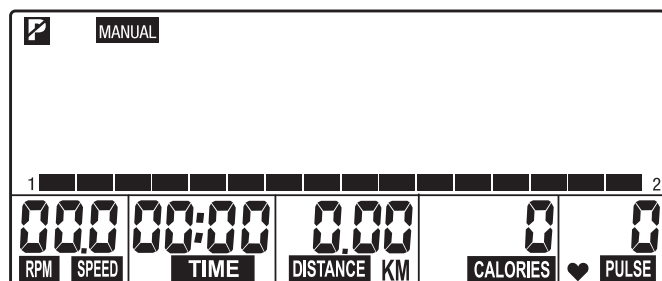
You may also reach the program line in the top display area by pressing the RESET key briefly without restarting the computer.



- Select the training program (MANUAL, PROGRAM, USER or TARGET H.R.) via the UP or DOWN key and confirm your selection via MODE.
- If the training mode you select is MANUAL, PROGRAM or USER and you pre-set a target value for your heart rate, the computer will activate an optical and acoustic alarm as soon as the current heart rate value reaches the target value.

Training > MANUAL

The route profile is represented evenly as a line. All default settings can be made individually [TIME, DISTANCE, CALORIES or PULSE].



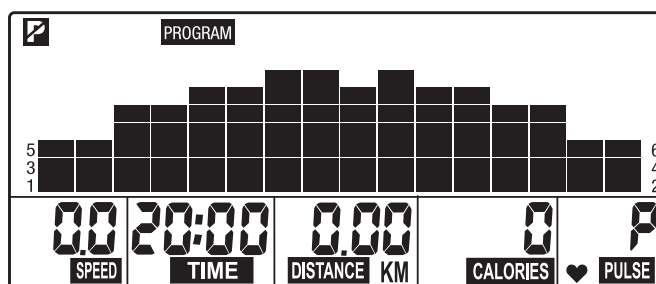
Training start pressing the START key and active training.

Via the UP and DOWN keys, the entire route profile can be increased or reduced either prior to the start of or during the training.

By means of the set training period (TIME), the computer counts the training progress in the route profile (bar graph) from left to right with a blinking bar. If the pre-set value [TIME, DISTANCE, CALORIES or PULSE] is reached, an acoustic signal will sound for 8 seconds. The training data is not counted further. You have reached your training target! By pressing the START key, it is also possible to continue your training.

Training > PROGRAM

Pre-set programs for your training



In the training mode PROGRAM you can select one of six different factory-pre-set training programs:

- PROGRAM 1 Fitness 1
- PROGRAM 2 Short interval program
- PROGRAM 3 Long interval program
- PROGRAM 4 Fitness 2
- PROGRAM 5 Fitness 3
- PROGRAM 6 Step program

By pressing the UP or DOWN keys, you can move from one program to the next. The alternating display shows the program number (P1-6) for about 1 second and then the route profile in blinking form. Via the MODE key you confirm your selection, or select another program via UP and/or DOWN.

If you have selected your program, you can additionally enter a default value [TIME, DISTANCE, CALORIES or PULSE].

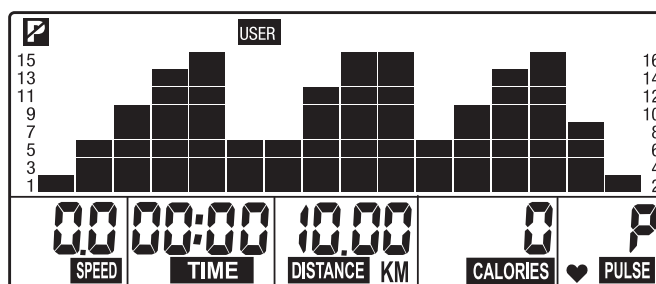
Training start by pressing the START key and active training.

Via the UP and DOWN keys, the entire route profile can be increased or reduced either prior to the start or during the training.

By means of the set training period (TIME), the computer counts the training progress in the route profile (bar graph) from left to right with a blinking bar. If the pre-set value [TIME, DISTANCE, CALORIES or PULSE] is reached, an acoustic signal will sound for 8 seconds. The training data is not counted further. You have reached your training target! By pressing the START key, it is also possible to continue your training.

Training > USER

Training program via user setting (User)



In the training mode USER you can design your individual route profile.

The setting is made via the keys UP or DOWN in order to adjust the profile height. You reach the next bar via the MODE key; then UP or DOWN again for height, etc. Program all 16 bars. Training start by pressing the START key and active training.

If you have designed your individual route profile, you can additionally set the default values. To this end, press the START STOP key. All default values can be set individually [TIME, DISTANCE, CALORIES or PULSE]. At least one default value must be selected. After completing the setting of the default values, you can start your training by pressing the START key and start your active training.

The entire route profile can be increased or reduced via the UP and DOWN keys either prior to the start of or during the training.

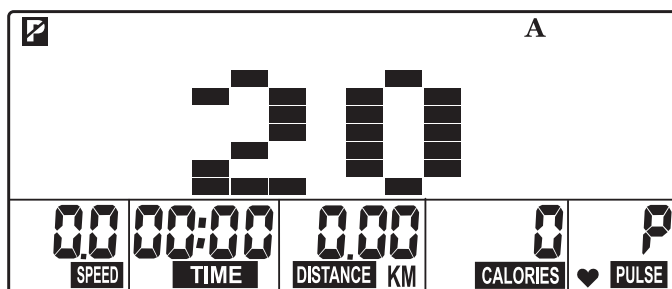
By means of the set training period (TIME), the computer counts the training progress in the route profile (bar graph) from left to right with a blinking bar. If the pre-set value [TIME, DISTANCE, CALORIES or PULSE] is reached, an acoustic signal will sound for 8 seconds. The training data is not counted further. You have reached your training target! By pressing the START key, it is also possible to continue your training.

Training > TARGET H.R.

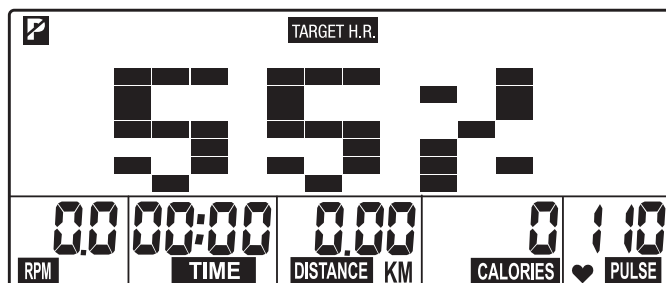
Training via target heart rate (THR)

In this training mode, the route profile is automatically adjusted to the setting values (age and THR) as well as the measured heart rate.

If you have selected the training mode TARGET H.R. via the keys RESET, UP / DOWN and MODE, a number appears in the large display. This number and the designation AGE will be blinking. Enter your age using the keys UP or DOWN and confirm it via MODE. Finally, the value 55% will appear in the large display.



You can either select 55, 75 or 90% and/or enter your individual setting of the target heart rate.



The percentage defaults 55%, 75% and 90% refer to the maximum pulse rate (220 - age) and pre-determine 3 general training intensities for the fitness training.

- 55% of the max. heart rate (220 - age) corresponds to the starting phase of the general fat burning trainings. This default can then also be increased manually to 65%.
- 75% of the max. heart rate (220 - age) corresponds to the phase for a general fitness training.

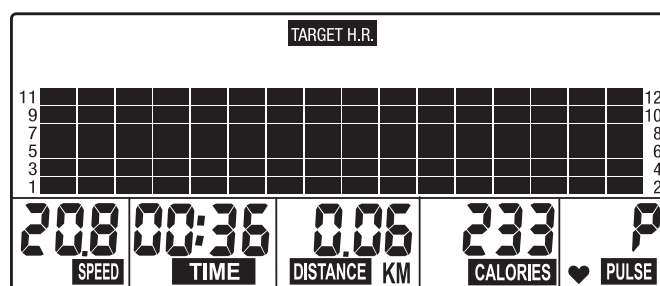
- 90% of the max. heart rate (220 - age) is only suited for shorter sub-maximum exertion intervals for performance increase in interval training.

After selecting your THR value, confirm it via MODE. You then reach the default setting.

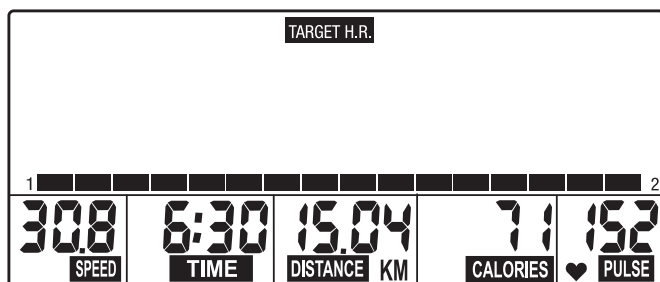
In this training mode it is not possible to set a PULSE value. All other default values can be set freely. [TIME, DISTANCE or CALORIES]

Training start by pressing the START key and active training.

- The computer compares your currently measured heart rate with the pre-set target value and accordingly adapts the braking level during your training.
- If the current heart rate is lower than the target value, the braking level will be increased by one step every 30 seconds, until the maximum value of the resistance or the set heart rate is reached.



- If the current heart rate is above the target value, the braking level is automatically reduced. It will be reduced by one step every 15 seconds until the set heart rate is reached.
- If the braking level has been reduced to 1, but the value for the heart rate still exceeds the target value for 1 minute, the computer will stop and an acoustic alarm signal will sound as a warning.



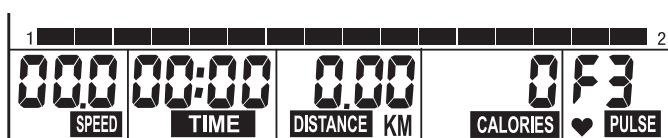
- Over the set training period [TIME] the computer counts the training progress in the route profile (bar graph) from left to right with a blinking bar.
- If the pre-set value [TIME, DISTANCE or CALORIES] is reached, an acoustic signal will sound for 8 seconds. The training data is not counted further. You have reached your training target! By pressing the START key, it is also possible to continue your training.

RECOVERY

Recovery pulse phase

The RECOVERY function can be selected after any training program.

With the RECOVERY key, you reach a recovery pulse measurement at the end of the exercise session. From the beginning and ending pulse of one minute, the deviation and the fitness grade is determined. With the same exercise session, the improvement of this grade is a measurement of the increased fitness. If you have reached the target value, end the exercise session, press the RECOVERY KEY and then lay your hands on the hand pulse sensors. With a previous pulse measurement in the display 00:60 appears for the time and in the PULSE display the current pulse value blinks. The time begins to count from 00:60 backwards. Keep your hands on the hand pulse sensors until >0< is reached. Right in the display a value between F1 and F6 is shown. F1 is the best and F6 the worse status. By pressing RECOVERY again, the function is ended.



6. Possibilities for Pulse Measurement

	✓	✓
	optional	✓
	optional	optional

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

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.

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.

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 or plug recipient is located in the pulse plug, hand pulse measurement is activated. If you insert an ear clip or a plug recipient in the pulse plug, hand pulse measurement is automatically deactivated. It is **not** necessary to disconnect the plug of the hand pulse measurement.

7. Notes

- If no signal is transmitted to the computer for 4 minutes, the LCD will shut off automatically and all existing training data will be stored. You can then press any button to reactivate the computer.
- If the computer is not displaying correctly, disconnect and then reconnect the power supply.

8. Training Instructions

For Your Safety:

- **Before beginning your program of exercise, consult your doctor to ensure that you are fit enough to use the equipment. Base your program of exercise on the advice given by your doctor. Incorrect or excessive exercise may damage your health.**

This device has particularly been designed and developed for leisure time sportsmen. It is excellently suited for cardiovascular 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 $(220 - \text{age}) \times 0.65$.

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 $(220 - \text{age}) \times 0.75$.

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:

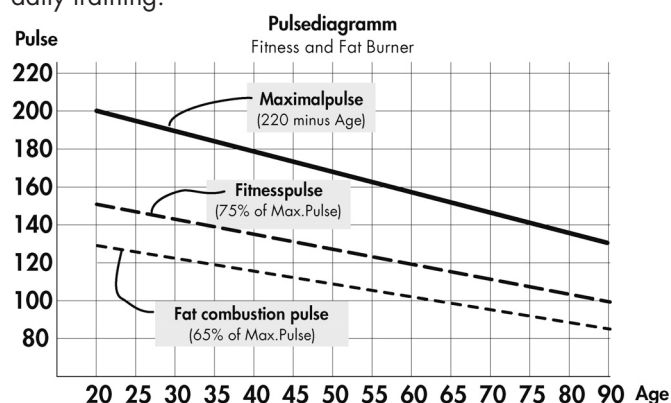
Frequency	Duration	
daily	10	min
2-3 times weekly	20-30	min
1-2 times weekly	30-60	min

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:

Frequency	Length of exercise blocks
1st week	
three times a week	2 minutes training 1 minute break for gymnastics 2 minutes training 1 minute break for gymnastics 2 minutes training
2nd week	
three times a week	3 minutes training 1 minute break for gymnastics 3 minutes training 1 minute break for gymnastics 2 minutes training
3rd week	
three times a week	4 minutes training 1 minute break for gymnastics 3 minutes training 1 minute break for gymnastics 3 minutes training
4th week	
three times a week	5 minutes training 1 minute break for gymnastics 4 minutes training 1 minute break for gymnastics 4 minutes 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.



Datum		Belastungsstufe	Kalorien	(kcal	Strecke	(km	Zeit	(min.
GB	Date	Effort stage	calories	(kcal	Distance	(km	Time	(min.
F	Date	Résistance	calories	(kcal	Distance	(km	Temps	(mn.
NL	Datum	Zwaarte van de training	calorieën	(km/h	Afstand	(km	Tijd	(min.
PL	Data	Stopień obciążenia	kilodżuli	(kcal	odległość	(km	czas	(min.
E	Fecha	Escalón de carga	Calorias	(kcal	Distancia	(km	Tiempo	(min.
I	Data	Fase dicarico	Calorie	(kcal	Percorso	(km	Tempo	(min.