

User Guide

MOTomed viva2, *Motomed gracile 12* MOTomed letto2



- GB Please use the MOTOMed only after you have read the user guide. If you should not understand the language of the present version, please request the instruction manual in your native language.
- DE Benutzen Sie das MOTOMed erst, nachdem Sie die Gebrauchsanweisung gelesen haben. Sollten Sie die vorliegende Sprachversion nicht verstehen, fordern Sie bitte eine Anleitung in Ihrer Landessprache an.
- FR Avant de commencer votre entraînement MOTOMed, veuillez lire le mode d'emploi. Si ce mode d'emploi ne correspond pas à votre langue, n'hésitez pas à nous demander une autre traduction.
- ES Utilice el MOTOMed sólo después de haber leído las instrucciones de uso. Si no entiende el idioma de la presente versión, por favor exija un manual en su lengua nacional.
- PT Use o MOTOMed somente, depois de ter lido as instruções de operação. Em caso que você não compreenda a língua desta instrução, peça por favor uma orientação em sua língua nacional.
- IT Per un ottimo funzionamento del MOTOMed leggere le istruzioni per l'uso. Se riscontrate qualche difficoltà riguardo la vostra lingua madre consultate il vostro servizio assistenza.
- NL Neem uw MOTOMed pas in gebruik nadat u de gebruiksaanwijzing hebt gelezen. Indien de gebruiksaanwijzing niet overeenstemt met uw moedertaal, aarzel dan niet ons te contacteren en een andere taalversie aan te vragen.
- SV Använd MOTOMeden endast, efter du har läst fungerande anvisningen. Om dig bör inte förstå den tillgängliga språkversionen, förfrågan var god a vägledning i ditt nationella språk.
- DK MOTOMed må først anvendes, når brugsanvisningen er gennemlæst. Forstår du ikke vedlagte brugsanvisning, rekvirer en dansk vejledning hos ProTerapi.
- PL Przed skorzystaniem z urządzenia MOTOMed prosimy zapoznać się z instrukcją obsługi. Jeśli instrukcja obsługi jest napisana w języku obcym ządajcie Państwo instrukcji w języku przez Państwa znanym.
- RU Используйте MOTOMед только после того, как прочитаете инструкцию по эксплуатации. Если Вам не понятен язык, на котором написана инструкция, запросите, пожалуйста, одну на родном языке.

Gentle, modern and sophisticated...

Congratulations! You have made an excellent choice by purchasing your MOTOmed. This movement therapy device provides outstanding performance. An innovative quality product »made in Germany« by RECK Company, supported by the latest computer technology.

The MOTOmed is an intelligent, motor-assisted movement therapy device. Enjoy the daily benefits of this therapy.

This user guide will help you to get to know the MOTOmed. It guides you through the functions and offers suggestions and hints on how to use your new movement therapy system to gain optimal benefit from the training. Before using the MOTOmed, please follow the *safety precautions* listed in the instruction manual.

Please refer to the instruction manual 713/W2559 in order to find information about the usage of the MOTOmed viva2, gracile12 and letto2 as well as our wide range of accessories.

If you have further questions or comments, please do not hesitate to call your MOTOmed representative or the RECK customer service team. We are happy to assist you.

Enjoy the training with your MOTOmed!

6	Operating panel
6	Operating modes
7	Foot insertion aid
7	Standard mode
7	Start screen
7	Quick start
8	Menu structure
8	Menu navigation (user guidance)
9	Program selection
16	Training screens
17	Key lock
18	Training menu
18	SpasmControl and MovementProtector
19	Automatic performance control
20	Set starting parameters
20	MOTOMed analysis
21	Device settings
22	Expert mode
22	Accessing expert mode
22	Program packages
24	Edit programs (programming)
24	Program design and parameters
25	Setting program parameters
26	Setting phase parameters
28	Modifications during training
29	Programming example
31	Additional device settings
33	Accessories/program additions
33	Chip card menu
39	MOTOMed Cardio16 pulse control
43	MOTOMed sam2 Training Analysis Program
44	4-Segment coordination program

Operating panel

Operating modes



The new MOTomed viva2 software provides two different operating modes.

The

»**standard mode**« is suitable for most MOTomed users and offers a simple and quick access to the basic functions and settings which are needed for a regular use of the MOTomed movement therapy.

The »**expert mode**« is designed for advanced MOTomed users and therapists who want to edit the basic programs and create special device settings. In the expert mode you are able to load additional program packages, change the existing programs and save these changes permanently. Additionally, full access is provided to all MOTomed settings.

Access to the standard mode and expert mode:

When you plug in the mains cable of your MOTomed into the wall socket, the MOTomed will initialize automatically (during this time there must be no legs/arms inserted). Subsequently, you can see the start screen of the »standard mode«.

Having the MOTomed in the stand-by mode (black display, continuous green LED light), you can select between starting the MOTomed in the standard mode or the expert mode:

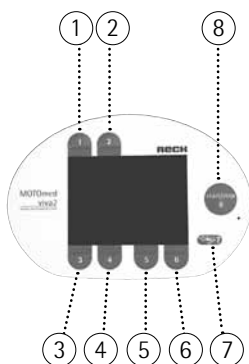


fig. 1

1. Standard mode:

Push the red »start/stop« button ⑧.
This is how you can start the training.

2. Expert mode:

When the display is black, push the buttons ① ① ② in quick succession.

Foot insertion aid

With button ⑦ »foot insertion aid« () the MOTOMed offers the possibility to bring the foot shells in a convenient position for foot insertion and removal. Hold either button ⑥ »pedals forward« or ⑤ »pedals backward« until the first foot shell is in a convenient position. Now you can insert and fix the first leg. Then you can drive the other foot shell into a desired position.



Always insert the less flexible leg first.

Standard mode

see page 6 **Start screen**



The start screen is the starting point for all operation options described in this guide!

In order to get back to the start screen from any menu, please push button ⑧ (during the training additionally push button ② »restart«).

Quick start

MOTOMed viva2/gracile12

MOTOMed letto2/letto2 leg/arm

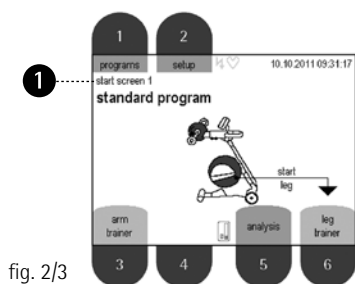
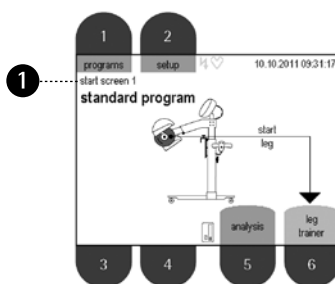


fig. 2/3



By pushing button ③ »arm trainer« or button ⑥ »leg trainer« you can start the currently loaded program ①.

Menu structure

The start screen (in standard mode) provides the following menu options:

Program menu

button (1) ➔ see page 9

- 1 standard program
- 2 MOTOMax
(MotivationProgram)
- 3 TRAMPOLINEmax
- 4 loosening program
- 5 strengthening and
endurance program
- 6 coordination
program

Settings menu

button (2) ➔ see page 21

- 2 language
- 3 display and volume
- 4 device settings
- 5 information
- 6 date/time

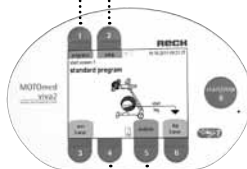


fig. 4

Chip card menu (accessory)

(only shown if chip card is inserted)

button (4) ➔ see page 33

- 1 show status (user)
- 2 delete training data points from chip card

Analysis menu

button (5) ➔ see page 20

- 1 previous training
- 2 total

Menu navigation (user guidance)



The color code of the listed menus simplify the navigation of the menu (green buttons stand for the next logical or possible selection).

Following principles are valid for all functions and settings:

- see page 7 1. The start screen provides access to all menus. Possible sub menus can be accessed by pushing button (6) »select«. To return to the previous level, push button (1) »back«.
Attention: All changes made are automatically saved by exiting the menu (or submenu)!
2. Within a listed menu use button (3)/(4) (▼/▲) to scroll through the menu options and change settings by using button (5)/(6) (↔/→).
- see page 7 3. To return directly to the start screen from every menu push the red »start/stop« button (8).

Program selection

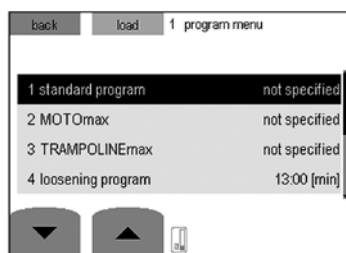


From your MOTOMed operating panel or your chip card (accessory), you can select any of the therapy programs available.

For this purpose access the program menu or insert your MOTOMed chip card into the card reader of your MOTOMed operating panel. The following programs are available in the standard mode (base settings can be adjusted during the training, but cannot be saved permanently):

Access via the start screen (page 8, fig. 4) button ① »programs«

fig. 5

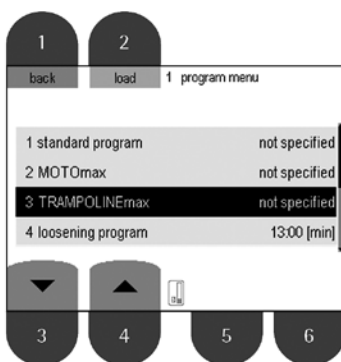


- 1 **standard program**
- 2 **MOTOMax**
(Motivation program)
- 3 **TRAMPOLINE max**
(Motivation program)
- 4 **loosening program**
- 5 **strengthening and endurance program**
- 6 **coordination program**

see page 22 For further program selection go to expert mode (packages).

Selecting and starting a program available on the MOTOMed

fig. 6



1. Go to the start screen and push button ① »programs«.
2. Scroll through the menu by repeatedly pushing button ③/ ④ (▼/▲) of the corresponding program.
3. Push button ② »load«.
4. Now the start screen reappears. Push button ⑥ »arm trainer« or ③ »leg trainer«, to start the training.

Start a program from your MOTOMed chip card:

If you have a MOTOMed chip card with a saved program, this program will load automatically once the chip card is inserted.

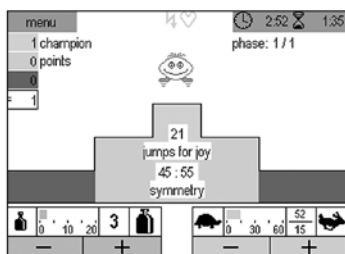
1 Standard program

The standard program is the most simple way to train with the MOTOMed. Push the red »start/stop« button (8) to access the start screen. Start training with button (6) »leg trainer« or button (3) »arm trainer«. The motor will automatically start moving the foot shells/handles or your legs/arms.

You can easily adjust the passive speed by pushing button (5)/(6) (🐢/🐘). Whenever you start cycling actively with own strength, the MOTOMed will recognize this impulse and you can change gears by pushing the (multi functional) buttons (5)/(6) (🚲/🚲). By pushing button (8) you can pause or end your training at any time.

2 MOTOMax (MotivationProgram)

fig. 7



Steer the game character Max (or his female friend Maxi) by using your own muscle strength! The game character will always lean to the stronger »pushed« side (movement direction »push« and »down«). The goal of the game is to train as evenly as possible

and getting a better coordination by achieving »jumps for joy«.

All important information (jumps for joy, champion points, gear, revolutions, pulse (accessory)) will be displayed at all times on the MOTOMax screen (fig. 7).

Jumps for joy (coordination): If you push exactly equally with both legs (symmetry 50:50), the game character performs a jump for joy. As soon as your pushing becomes uneven (to the right or left side), the game character stops jumping.

Champion points (strength and endurance): You can collect champion points by staying on the colored podium. The lowest red level provides the least number of points. On the yellow level you achieve twice the number of points and on the highest green level you can collect triple points. The more performance (results from the adjusted gear and the active speed) you accomplish, the more champion points you will get.

Alternative: You can change the reaction of the game character to your pushing so that the character moves away from the side that pushes most. To make this adjustment proceed as follows:

see page 6

see page 8

1. Access the start screen in expert mode.
2. Push button (2) »setup«.
3. Mark line 3 »program packages« and push button (6) »next«.
4. Mark line 6 »pushing right, MOTOMax moves« and use button (5)/(6) to select »left«.

End of training: The MOTOMax MotivationProgram will stop automatically according to the preset time or if you stop the training manually (default setting: not specified). The character will stop moving and the screen will freeze for an additional 2 minutes (if this is the last phase of the program), so that the user can read the results. Push the red »start/stop« button (8) to reach the start screen.

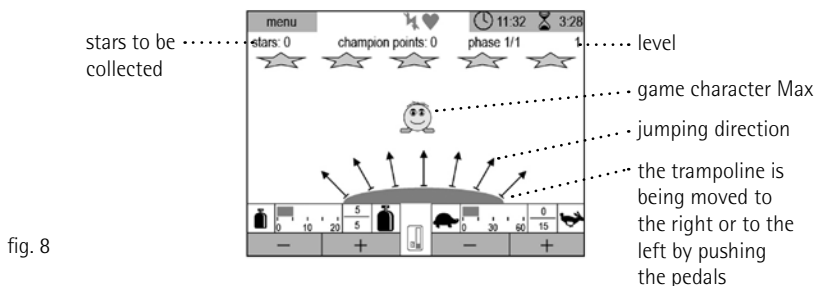


In general, the number of champion points indicates the muscle strength/performance of the user. The number of jumps for joy rather indicates the accuracy / concentration.

Usually you can only achieve good results in one of the two areas. Higher strength input is generally connected to less precision. More precision can better be achieved with lower physical input.

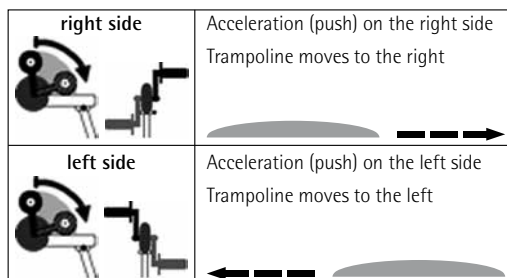
3 TRAMPOLINE max (MotivationProgram)

Max should collect as many stars as possible in the time given. The game can be played with the arms or the legs.



Course of the game:

1. The trampoline can be moved to the right/to the left by accelerating (pushing) the right or the left pedal differently. In doing so, it is important how much you are pushing each pedal.
2. The harder you push the pedal the farther the trampoline moves. Pushing faster will move the trampoline more frequently.



3. In the beginning, Max moves towards the trampoline. The game figure bounces off the trampoline in different angles upward or to the side, depending at which point it hits the trampoline.
4. If Max catches a star, it will be »collected«. As soon as all stars are collected the game switches to the next level (max. level 3).

5. If no star has been collected within 30, 35 or 40 seconds (depending on the difficulty level), a new star appears.
6. If Max hits the ground, it falls back to the previous level.
7. If you stop training actively, Max falls asleep and pauses. However, the timer continues and stars reappear.

Levels:

Level	Symbols	Number
1	★	5
2	★	8
3	★	12

The game consists of 3 levels. The goal of the game is to reach level 3 where the most stars are available and can be collected.

fig. 10

Setup:

Different settings can be made for the game:

Level of difficulty	Beginner Advanced Professional
Game version	with targeting assistance standard

fig. 11

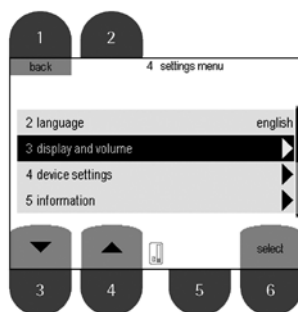
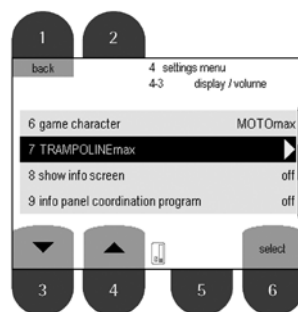


fig. 12/13

Go to »setup« line 3
»display and volume« and
push button ⑥ »select«.



Mark line 7
»TRAMPOLINEmax« and
push button ⑥ »select«.

Target assistance:

If target assistance is activated, Max jumps automatically towards the right direction when only one star is left to collect. Thus the last star can be collected easily.

Difficulty levels:

The game can be played in 3 different difficulty levels. The size of the trampoline, the speed of the character and the time it takes until new stars reappear can be changed in the the settings. Default setting is the difficulty level »beginner«.

Beginner:

Level	Max starting speed	Max end speed	Trampoline size	Duration until new stars appear
1	very slow	slow	big	40 seconds
2	very slow	slow	big	40 seconds
3	very slow	slow	big	40 seconds

fig. 14

Advanced:

Level	Max starting speed	Max end speed	Trampoline size	Duration until new stars appear
1	slow	moderate	big	35 seconds
2	slow	moderate	middle	35 seconds
3	slow	moderate	small	35 seconds

fig. 15

Professional:

Level	Max starting speed	Max end speed	Trampoline size	Duration until new stars appear
1	slow	moderate	big	30 seconds
2	moderate	fast	middle	30 seconds
3	fast	very fast	small	30 seconds

fig. 16

Champion points:

You can achieve champion points in addition to the stars you collected. The champion points consist of the resistance level (gear) and the related speed. They record the performance of the user. Additionally, for the same performance you get more champion points when you are in a higher level than you would get in a lower level.

4 Loosening program

Special sequences of passive movement help you to loosen and relax your muscles.

The special MOTomed MovementProtector provides a smooth, gentle movement which can help you to reduce your muscle stiffness (tone) and ease the spasticity symptoms, and loosen daily tensions.

5 Strengthening and endurance

The strengthening and endurance program is a special training sequence, connecting basic endurance training with a strengthening component. Thus strength and endurance, especially of the leg muscles, can be trained. A strong and persistent leg musculature is one of the most important requirements for a good walking ability and can help to prevent falls.

You can individually regulate the resistance to your needs through the simple MOTomed guidance. A valuable addition to the endurance program is the *MOTomed cardio16 pulse control (accessory, item no. 275 or 276)*, enabling a pulse-controlled training (resistance controlled by pulse level).

6 Coordination program

The coordination program/4-Segment includes special training which particularly targets coordination and concentration. The combination between physical (input) and mental (concentration) activity can cause positive cognitive adaptation effects and help to increase your walking stability by controlling (coordination) your own movement.

In order to modify the coordination program/4-Segment or to create an individual program, you require the accessory »4-Segment Coordination Program« (item no. 202).

see page 44

Training screens

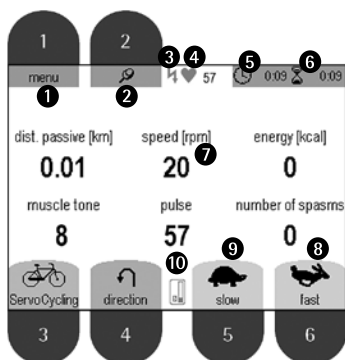


fig. 17

You can adjust the most important settings for your training (passive speed and gear) without having to pause the training. During the passive training (the motor of the MOTOMed is moving your legs/ arms) you may adjust the training speed at any time with button (5) »slow« (🐢) or (6) »fast« (🐘), to decrease/increase the passive speed.

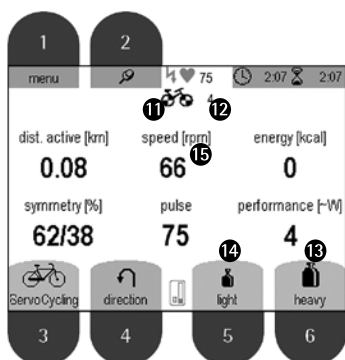


fig. 18

If you are training actively (you are cycling/pedaling on your own), you can decrease/increase the resistance level with button (5) »light« (🚲) or (6) »heavy« (🏋️).

By default, current information (speed, time, performance, symmetry, etc.) is displayed alternating during training. If you would like to freeze one certain display (e.g. the symmetry bar), push button (2) (🔒) to »hold« the current screen. By pushing button (2) (🔒) again, you reactivate the alternating display. If you wish to scroll through the display screens, push button (2) (🔒) and then button (2) (🔒) in quick succession.

Refer to the following table for a detailed description of symbols and information shown on the display (fig. 17, fig. 18):

- 1  menu selection with button ①
- 2  by pushing button ② you can freeze the display
 alternating display function: alternating display information can be activated
- 3  SpasmControl »on« (green flash symbol)
 SpasmControl »off« (gray, crossed out flash symbol)
- 4  total training time
- 5  remaining time in a phase (only in therapy programs)
- 6 **20** passive speed in revolutions/min. (with motor)
- 7  increase passive speed (button ⑥ »fast«)
- 8  decrease passive speed (button ⑤ »slow«)
- 9  bicycle icon (appears during active training)
- 10 **4** current gear
- 11  increase resistance 1-20 (button ⑥ »heavy«)
- 12  decrease resistance level 1-20 (button ⑤ »light«)
- 13 **66** active speed (rpm)
- 14  pulse monitor »good signal« (heart symbol green)
 pulse monitor »low signal« (heart symbol orange)
 »pulse exceeded maximum pulse limit« (red blinking heart symbol)

If this value is exceeded for more than 15 seconds the MOTomed shuts off automatically.

 pulse monitor »off« (gray heart symbol)
 pulse monitor »no signal« (heart symbol orange with no filling)
- 15  blue arrow on chip card symbol indicates there is no chip card inserted
 chip card is inserted (the bar on the right side shows remaining memory)
 chip card was not detected (symbol is crossed out)

Key lock

A key lock can be activated in order to avoid changing the data set for a training. For this purpose push button ⑦ () 3 times successively. As soon as the keys are locked the symbol »« will appear on the screen. In order to switch off the key lock push button ⑦ () 3 times successively. If required, the key lock has to be reactivated with each training session. Switching off the MOTomed (with button ⑧) is always possible, even with an activated key lock.

Training menu

If you wish to make further adjustments (e.g. training time, SpasmControl, pulse control, ...) during the training, push button ① »menu«. Thereby you enter the training menu (fig. 19).



As soon as you are in the training menu, the MOTomed goes into pause and the pedals cannot be moved anymore.

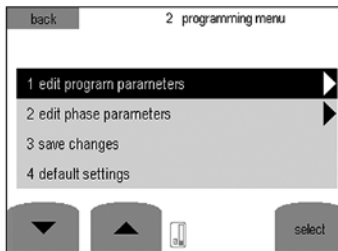


fig. 19

You can adjust the following parameters:

- 2 duration
- 4 gear
- 5 passive speed
- 6 SpasmControl
- 7 automatic change of direction
- 8 pulse control (accessory)
- 9 automatic performance control
- 10 flywheel mass
- 11 movement direction
- 19 save starting parameters (standard program)
- 20 skip current training phase

By pushing button ① »back« the MOTomed starts and the modifications remain for the current training.

SpasmControl and MovementProtector

see page 24 The program menu (see expert mode) allows you to activate or deactivate the SpasmControl for every program individually, to set the sensitivity of the SpasmControl and to determine the behavior after a spasm has eased.

see page 25 In the basic MOTomed setting the *SpasmControl* reverses the pedal direction after a spasm has been detected. The training is resumed in the same direction. Go to the program menu to the SpasmControl submenu and set line 2 »restore direction« to »on« if you want the original rotation direction, e.g. »forward« to be restored after loosening a spasm.

see page 21

The sensitivity of the SpasmControl can be adjusted in the settings menu in the devices settings or during the training in the training menu. With the »sensitive« setting, the MovementProtector is already activated even after a short movement blockade (e.g. spasm), while on the contrary it has a longer reaction span with the setting »less sensitive«. You can adjust the maximum motor power in the »motor power« settings (1-10).



A low motor power is recommended for rather weak users where a too strong motor power could cause injuries (e.g. with severe brittle bone disease or danger of luxation).

A high motor power is recommended if the user generally shows a high muscle tone (e.g. strong spasm or rigor).

Automatic performance control

Certain active muscle performance can be specified (in Watt) for the training feedback. The automatic performance control regulates the resistance level. If your active muscle performance exceeds this preset value the performance control function decreases the resistance level. If your performance lies below the preset value, the resistance level is decreased (up to the preset value). The pulse control can also be adjusted during training in the training menu.

see page 24

In the program menu (see expert mode) you can activate or deactivate the automatic performance control individually for each program or set the performance (in Watts).



The settings are only valid for the current training program.



In case the pulse and performance control are both activated the resistance level will be controlled according to the pulse control settings.

Set starting parameters

In order to configure the starting parameters (e.g. SpasmControl, revolutions, duration, resistance level, flywheel mass,...) of the »standard program« follow these instructions:

- see page 18
1. Start the standard program and access the training menu by pushing button ① »menu«.
 2. Specify your starting parameters and go to line 19 »save starting parameters«.
 3. Push button ② »OK«.
 4. Confirm the starting parameters settings by pushing button ③ »yes« or cancel with button ⑥ »no«. Alternatively, you can also choose the default starting parameters
 5. Select location for the starting parameters (button ③ »MOTomed« or button ④ »chip card«).
- Now your MOTomed will start in the »standard program« with your starting parameters.



You can specify different starting parameters for your leg or arm/upper body training.

MOTomed analysis

After you have finished your training you can display a list of the individual performance (distance, time, speed, active/passive share, ...) (fig. 21). To do this go back to the end screen or on the start screen push button ⑤ »analysis« (fig. fig. 20).

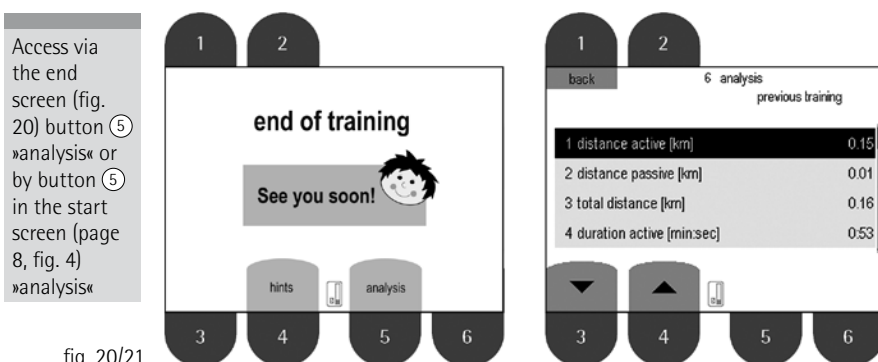


fig. 20/21

RECH MOTomed

OPERATION

Device settings

Basic settings of your MOTOMed (device settings, display/volume, date/time, ...) can be adjusted in the setup menu (fig. 22). Go to the start screen and push button ② »setup«.

Access via start screen (page 8, fig. 4) button ② »setup«

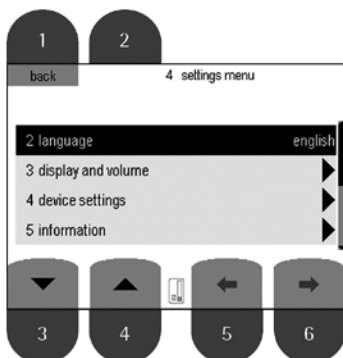


fig. 22

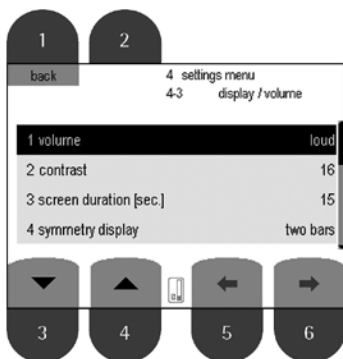


fig. 23

Use the buttons ③/④ (▼/▲) to select the desired menu item. By pushing button ⑥ »next« you can access the submenu (if applicable). Change the settings with buttons ⑤/⑥ (←/→), when needed.

Following parameters are available:

Menu point:	Sub menu
language	- display and volume - volume - contrast - screen duration [sec] - symmetry display - game character - TRAMPOLINEmax - show help info screen - select info panel coordination - program - alternative start screen
device settings	- units - salutation - motor power leg trainer - motor power arm trainer - activity detection - SpasmControl detection
information	- device type - version - release date - status code - system ID
date/time	- hour - minute - day - month - year - daylight saving time

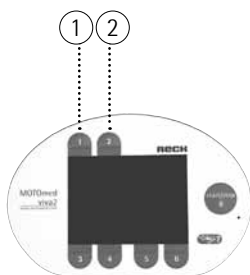
see page 31

Further adjustments are available in the expert menu.



Expert mode:

Accessing expert mode



In order to access the expert mode make sure the MOTomed is in stand-by mode (display black, green start light active).

fig. 24



Push the buttons ① ① ② in quick succession.

MOTomed viva2/gracile12

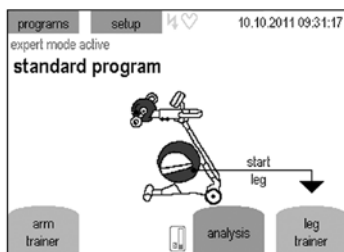
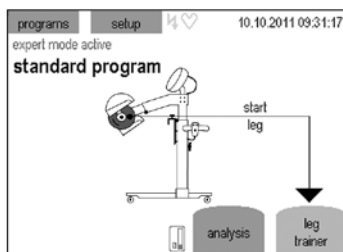


fig. 25/26

MOTomed letto2/letto2 leg/arm



The MOTomed starts in expert mode, on the start screen the information »expert mode active« is shown above the program name. Now you have the possibility to modify existing programs or to replace them by individual programs. Furthermore, additional functions are available in most of the menus.

Program packages

Additionally to the programs selectable in standard mode, there are eight more training programs on your MOTomed operating panel. A total of 14 training programs are available. The programs are divided into 3 program packages as follows:

Program package 1: therapy goals

- 1 standard program
- 2 MOTOmax (MotivationProgram)
- 3 TRAMPOLINE max (MotivationProgram)
- 4 loosening program
- 5 strengthening and endurance
- 6 coordination program

Program package 2: specialty fields

- 1 standard program
- 2 PC games
- 3 FES program (especially for muscular stimulation)
- 4 ortho (suggestion for orthopedic patients)
- 5 neuro (suggestion for neurological patients)
- 6 cardio (program suggestion for cardiological patients)

Program package 3: indications

- 1 standard program
- 2 MOTOmax (MotivationProgram)
- 3 MS (improves strength and endurance and helps with loosening)
- 4 stroke (better body symmetry and movement initiation)
- 5 Parkinson's program (develops loosening and coordination)
- 6 individual program



Default setting is always the program package »therapy goals«. In case a chip card with a training program is inserted it will be indicated in the program package as: »7 program from chip card«.

In the standard program the basic settings are only adjustable during the training session and cannot be stored.

Access via the program menu in the expert mode (page 29)

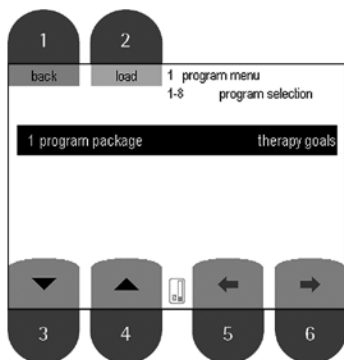


fig. 27

1. Access the start screen in the expert mode (page 22, fig. 25/26) and push button ① »programs«.
2. Use button ③/④ (▼/▲) to select line 8 »program packages« and push button ⑥ »select«.
3. Use button ⑤/⑥ (←/→) to select the desired program package and confirm by button ② »load«.
4. The program package will be loaded to the program menu

and you can select one of the programs listed in the menu.



Changing a program package will set all programs to default. All individual settings and changes will be lost!

Edit programs (programming)

Program design and parameters

Access via the program menu in the expert mode (page 29)

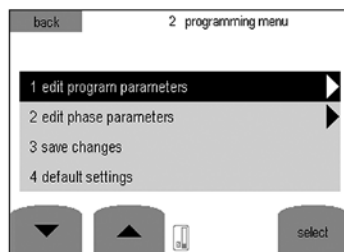


fig. 28

A therapy program consists of different sequences, the so called »phases«. Phases are trained subsequently and can have various designs (training tasks). In order to train different training tasks in succession you have to assign phases to the therapy program accordingly (up to 30).

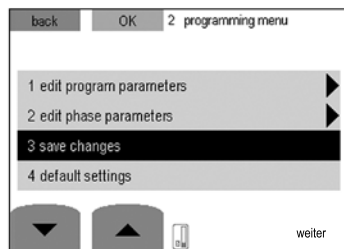


fig. 29

Program parameters define the basic settings of a program (e.g. name, number of phases, SpasmControl »on/off« etc.) and are valid for all phases. Phase parameters on the other hand define the content/ characteristics of each phase (e.g. training task, phase duration (min/ sec), passive speed, etc.) and are valid for the current phase only.



When editing a therapy program you can specify program and phase parameters.

Setting program parameters

Settings which have an effect on the entire program are set in the program parameter menu (fig. 30). In order to access this menu please use button (3)/(4) (▼/▲) to select the desired program from the program menu (in the expert mode) and confirm with button (6) »edit«. The programming menu appears (fig. 28). Now mark line 1 »edit program parameters« and push button (6) »next«.

see page 24

Access via
the program
menu in the
expert mode
(page 29)

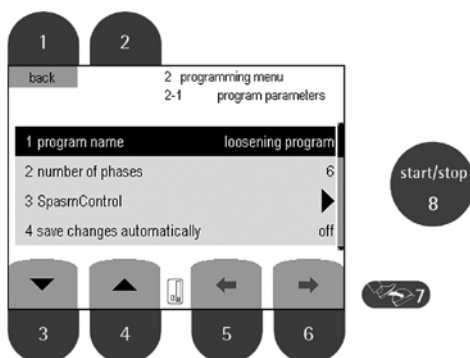


fig. 30

Possible settings (program parameters):

- 1 program name
- 2 number of phases
- 3 SpasmControl
- 4 save changes automatically
- 5 cardio16 pulse control (optional)
- 6 automatic performance control
- 7 flywheel mass
- 8 save training data to chip card

- 9 sound at end of phase
- 10 display of phase change [sec]
- 11 segment filter setting
- 12 change in speed/gear
- 13 serial interface (optional)
- 14 repetitions
- 15 display

see page 24 If you wish to save your changes push button ① »back«. The programming menu (fig. 28) appears. Save your changes by marking line 3 »save changes« and confirm with button ② »OK« (fig. 29).

Setting phase parameters

You can specify the content or characteristics of individual phases in the programming menu in the menu »edit phase parameters« (fig. 31). In order to access this menu, go to the program menu using buttons ③/④ (▼/▲) and mark the program to change, then push button ⑥ »edit«. Now mark line 2 »edit phase parameters« and push button ⑥ »select«. At the right top corner of the screen (fig. 31) the current program phase will be indicated.

see page 30 If you wish to switch between phases push button ⑦ () and then button ⑤ »previous phase« or button ⑥ »next phase« (fig. 40). Alternatively you also can mark the lines 16 »go to next phase« or 17 »go to previous phase«.

Following training tasks are available for your individual program phases: MOTomed standard training (active/passive), SymmetryTraining, MOTOmax (MotivationProgram), TRAMPOLINEmax, pause of training or one of the 15 alternatives of the 4-Segment Coordination Program (accessory).

Standard training tasks (available as standard):

Standard training with alternating screens (black arrows: »active phase«; white arrows: »passive phase«)



Standard active: The user is encouraged to pedal actively.



Standard passive: Allow the motor to move the legs/arms of the user.



SymmetryTraining: Both legs (arms) shall be used actively. The stronger and weaker side of the body is being measured and the results are displayed on the screen by two bar graphs (the push movement is measured) in order to achieve a balanced training.



Certain accessories can affect the measurements of the SymmetryTraining and the MOTOmax and TRAMPOLINEmax MotivationPrograms.



MOTOmax (MotivationProgram): Control the MOTOmax game character using your muscle strength and collect champion points and jumps for joy.



TRAMPOLINEmax (MotivationProgram): Collect as many stars as possible with the Max on the trampoline.



Pause of training: For the preset duration, the training is interrupted and the pedals are blocked.

The following settings are available phase parameter):

Access via the program menu in the expert mode (page 29)

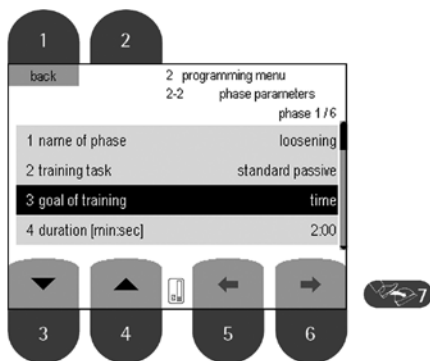


fig. 31

- | | |
|-----------------------------|---|
| 1 name of phase | 6 resistance level |
| 2 training task | 7 passive speed [rpm] |
| 3 goal of training | 8 direction |
| 4 duration [min./sec.] | 9 active/passive alternation |
| 5 »right/left« side of body | 10 automatic change of direction [min.] |

- | | |
|--|----------------------------------|
| 11 crank configuration (parallel mode) | 14 save changes to all phases |
| 12 delete current phase (only if more than one phase is available) | 15 copy function to other phases |
| 13 duplicate current phase (imported after current phase) | 16 go to next phase |
| | 17 go previous phase |

If you wish to save your changes push button ① »back« and save changes by marking line 3 »save changes« and confirm with button ② »OK« (fig. 29).



While creating or editing a program specify the program parameters first, then set the phase parameters.

Modifications during training

During the training you can easily adjust the active resistance level (gear) or the passive speed, at any time. For this purpose push button ⑤ »slow« () or ⑥ »fast« () (motor speed) or buttons »light« () or »heavy« () (resistance level).



When you are training in the standard program the buttons ⑤ and ⑥ are multi functional. When you have your legs moved passively by the motor the symbols () »slow« and () »fast« appear and you can modify the passive motor speed. If you are pedaling on your own, () »light« and () »heavy« are displayed. This allows you to modify the resistance level.

see page 26 The applied changes remain in effect until the end of the complete training program and have an effect on all phases of the program. If you set line 12 of the program parameter menu »changes in speed/gear« on »current phase« your modifications only apply to the current phase of the program.

Programming example

Select and edit an available MOTomed program in order to create an individual therapy program (e.g. »loosening program«)

At first, specify the program characteristics (program parameters) followed by the characteristics/content of the individual phases (phase parameters).

Starting point: The MOTomed is in stand-by-mode (display black, green start light active)

key sequence
① ① ②
①
»programs«

1. Start the MOTomed in expert mode and access the program menu

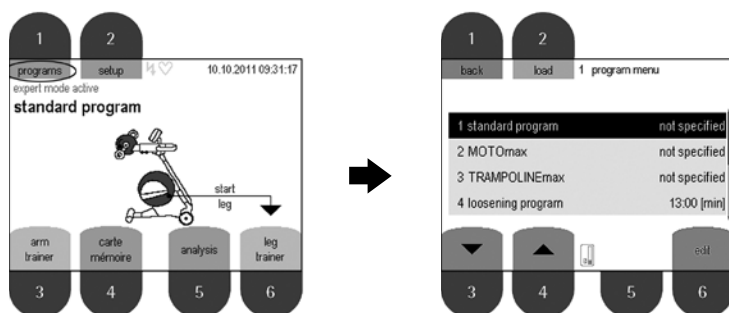


fig. 32/33

key sequence
③ (▼) or ④
(▲) (program
selection) ⑥
»edit«

2. Select a program and access the programming menu

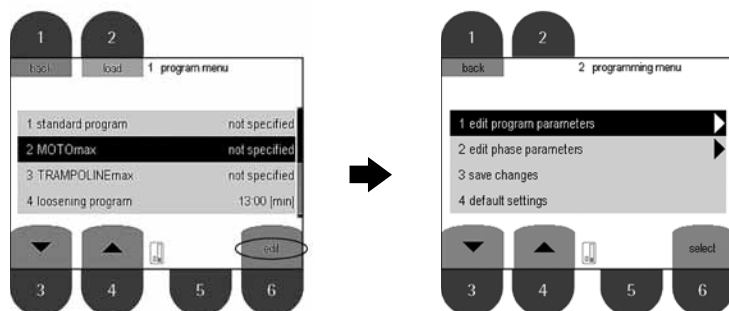


fig. 34/35

key sequence

⑥
③ (▼) or
④ (▲)
⑤ (◀) or
⑥ (▶)
(save
changes);
① »back«

3. Access the program parameter menu and adjust the program parameters

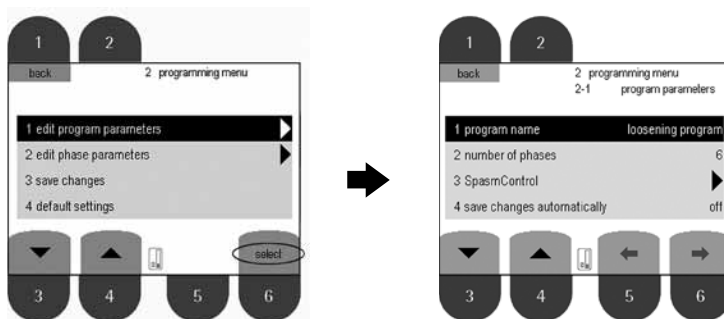


fig. 36/37

key sequence

③ (▼)
⑥ »select«
③ (▼) or
④ (▲)
⑤ (◀) or
⑥ (▶)
(save
changes)

4. Access the phase parameter menu and adjust the phase parameters

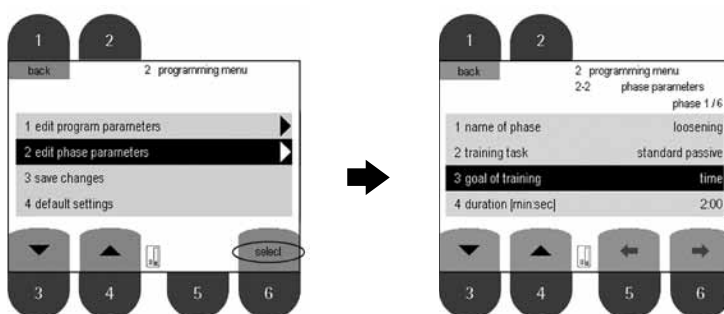


fig. 38/39

key sequence

⑦ (activate
alternation
mode);
⑤ or ⑥ (go
to next /
previous
phase)

5. Switch between the individual phases (indication of the current phase at the right top corner of the screen)

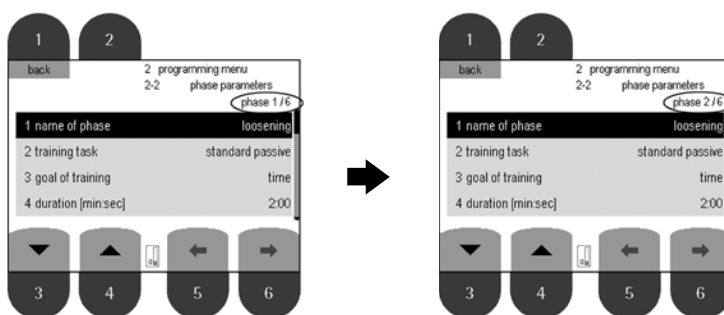


fig. 40/41

key sequence
 ① »back« ③
 (▼)
 ② »OK«

6. Go back to the programming menu and save your changes

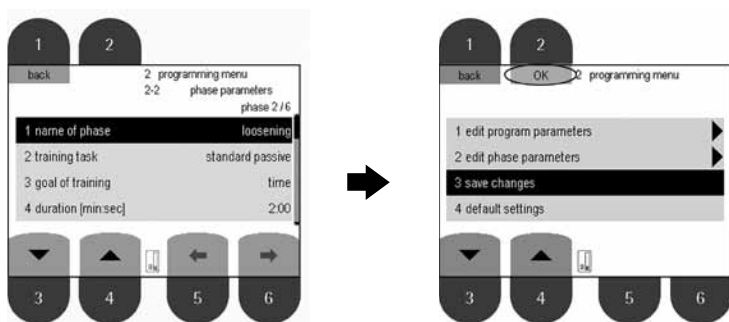


fig. 42/43

Additional device settings

see page 22 Go to the expert mode start screen (fig. 25/26) and push button
 ② »setup«. As an addition to the adjustment possibilities already
 see page 21 described in the settings menu chapter, the menu items marked in
 bold in the below table are available in expert mode:

Access via
 start screen
 (page 22, fig.
 25/26) button
 ② »setup«

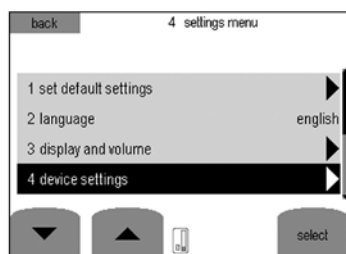


fig. 44

Menu points

- 1 set default settings
- 2 language
- 3 display and volume
- 4 device settings
- 5 information
- 6 date/time
- 7 enter activation code
- 8 production

The menu items are subdivided as follows:

Menu point:	Sub menu
1 set default settings	reset device settings reset training programs delete training data reset all

Menu point:	Sub menu
2 language	volume
3 display and volume	contrast
	screen duration [sec]
	symmetry display
	pushing right, MOTOmax moves right
	game character
	TRAMPOLINEmax
	show help info screen
	select info panel coordination program
	start screen information
	end of program signal
	buttons for alternating display
	4-Segment bar display
	(only available if accessory is installed)
	correction angle arm symmetry
	correction angle leg symmetry
	alternative start screen
4 device settings	Start program
	Units
	motor power leg trainer
	motor power arm trainer
	Cardio16/pulse control (optional)
	magnet switch (optional)
	acoustic switch (optional)
	ChipOx (optional)
	blood pressure meter (optional)
	speed from active to passive mode leg trainer
	speed from active to passive mode arm trainer
	max. speed leg trainer
	max. speed arm trainer
	servo assistance
	operating mode
	activity detection
	SpasmControl detection
5 information	device type
	version
	release date
	status code
	incident log
	system ID
	motor current offset
6 date/time	hour
	minute
	day
	month
	year
	daylight saving time
7 enter activation code	
8 production	

Accessories/ program additions

Chip card menu (item no. 203)

With your RECK MOTomed chip card, you can regularly record your training data and file, evaluate and print it using the »sam2« analysis program or the simple print program »sPrint«. You can save your individual starting parameters of the MOTomed on your chip card so that every MOTomed with a chip card reader can be adapted to you. You can start training programs from the chip card or you can



fig. 45

save programs from the MOTomed to your chip card. Furthermore, you can permanently save chip card programs to your MOTomed operating panel. Insert your chip card into the chip card slot in the operating panel of your MOTomed with the blue arrows facing downwards (fig. 45). The chip card program will then automatically be loaded. To remove the chip card, slightly push it so that the chip card pops out of the MOTomed operating panel and can be pulled out easily.

Start a chip card program:

The chip card program will automatically be loaded as soon as the card is inserted into the MOTomed operating panel. You will hear an acoustic signal when the program has completely been loaded. The green chip card symbol (📇) appears in the lower corner of the start screen. The program name as well as the message »program from chip card« are shown. Start the program by pushing button (3) »arm trainer« or (6) »leg trainer«.



see page 8

In order to access the chip card menu insert your chip card into the operating panel and select button (4) »chip card« from the start screen.

see page 22 In order to be able to use all functions of the chip card you must access the expert mode! The following adjustments are available:

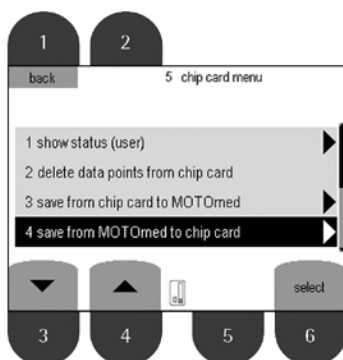


fig. 46

- 1 show status (user)
- 2 delete data points from chip card
- 3 save data from chip card to MOTomed
- 4 save MOTomed to chip card
- 5 format chip card (overwrite)



In standard mode you can only access line 1 and 2!

1 Show status:

In order to check the status of your MOTomed chip card (user data, capacity, number, training data points), use the buttons (3)/(4) (▼/▲) to mark line 1 »show status (user)« and push button (6) »select«.

2 Delete training data points from chip card:

In order to delete all training data available on your chip card (not the user data) use the buttons (3)/(4) (▼/▲) to mark line 2 »delete training data from chip card« and confirm with button (2) »OK«. The user data which control the MOTomed therapy program remain unchanged!

3 Save data from chip card to MOTomed:

3.1 Save a single program from chip card to the MOTomed (only in expert mode):



By carrying out this action, the currently loaded program will be replaced by the chip card program!

- a) Insert a chip card containing a single program into the operating panel.

- b) Push button (4) »chip card« from your expert mode start screen.
- c) Use the buttons (3)/(4) (▼/▲) to mark line 3 »save from chip card to MOTomed« and push button (6) »select«.
- d) Mark line 1 »single program« and push button (2) »OK«.
- e) Push the red »start/stop« button (8) to return to the start screen.

3.2 Save a program package from chip card to the MOTomed (only in expert mode):



Carrying out this action, will replace the currently loaded program by the chip card program package!

- a) Insert a chip card containing a program package into the operating panel.
- b) Push button (4) »chip card« from your expert mode start screen.
- c) Use the buttons (3)/(4) (▼/▲) to mark line 3 »save from chip card to MOTomed« and push button (6) »select«.
- d) Use the buttons (3)/(4) (▼/▲) to mark line 2 »all programs« and confirm with button (2) »OK«.
- e) Push the red »start/stop« button (8) to return to the start screen.

3.3 Load system settings (only in expert mode)

- a) Insert a chip card containing system settings into the operating panel.
- b) Push button (4) »chip card« from your expert mode start screen.

- c) Use the buttons (3)/(4) (▼/▲) to mark line 3 »save from chip card to MOTomed« and push button (6) »select«.
- d) Mark line 3 »system settings« and confirm with button (2) »OK«.
- e) Push the red »start/stop« button (8) to return to the start screen.

4 Save from MOTomed to chip card (only available in expert mode):

The currently loaded program as well as the entire program package and the settings can be saved on the chip card.

4.1 Save the current program to chip card:

- a) Push button (4) »chip card« from your expert mode start screen.
- b) Use the buttons (3)/(4) (▼/▲) to mark line 3 »save from MOTomed to chip card« and push button (6) »select«.
- c) Use the buttons (3)/(4) (▼/▲) to mark line 1 »current program« and confirm with button (2) »OK«.
- d) Push the red »start/stop« button (8) to return to the start screen.

4.2 Save a program package to chip card:

- a) Push button (4) »chip card« from your expert mode start screen.
- b) Use the buttons (3)/(4) (▼/▲) to mark line 4 »save from MOTomed to chip card« and push button (6) »select«.
- c) Use the buttons (3)/(4) (▼/▲) to mark line 2 »all programs« and confirm with button (2) »OK«.
- d) Push the red »start/stop« button (8) to return to the start screen.

4.3 Save system settings to chip card:

- Push button ④ »chip card« from your expert mode start screen.
- Use the buttons ③/④ (▼/▲) to mark line 4 »save from MOTOméd to chip card« and push button ⑥ »select«.
- Use the buttons ③/④ (▼/▲) to mark line 3 »system settings« and confirm with button ② »OK«.
- Push the red »start/stop« button ⑧ to return to the start screen.

5 Format chip card (create a new user account) (only available in expert mode):

You can personalize your chip card directly on the MOTOméd operating panel, that includes creating a new user account or editing existing user data. The ID screen (fig. 47) allows you to specify personal information like name, date of birth, gender, and to save the data to the card.

In this context all data previously saved on the card (user data and training data) will be deleted.

For this purpose proceed as follows:

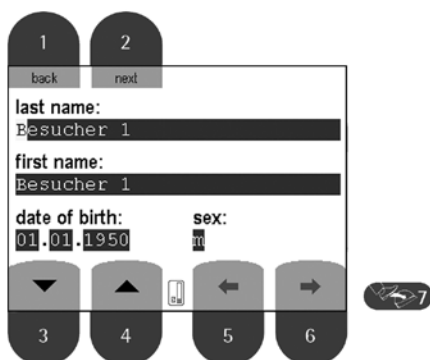


fig. 47

1. Insert your chip card into the operating panel (fig. 45).
2. Push button ④ »chip card« from your expert mode start screen (fig. 25/26).
3. Use button ③/④ (▼/▲) to select line 5 »format chip card« and push button ② »select«.

4. In the screen provided (fig. 47) use the buttons ③/④ (▼/▲) (select letter) to ⑤/⑥ (←/→) (select letter position) to enter your data. With button ⑦ the text can be deleted from the chosen cursor position.
5. Push button ① »next« or button ② »back« to switch between the lines (last name, first name, date of birth, gender).
6. Once you reach the last line (gender) the button ② »OK« will turn green. Push this button to delete all data from your chip card and save the new settings on the chip card.

MOTOmed Cardio16 pulse control (item no. 275 or 276)

In order to train at an optimal resistance level at any time, you may allow the pulse control monitor to control your training. For this you can individually define a preferred pulse limit (upper and lower limit). The MOTOmed automatically increases or decreases the resistance level you are training with in order to keep your pulse within your preset pulse range. Please consult with your physician about the optimum training pulse.

As long as your pulse stays within the preset pulse range, the resistance level will not change. The preset resistance level, e.g. resistance level 10, can be divided into half due to an increased pulse (in our example resistance level 5). As soon as the pulse falls below the lower limit the resistance level increases up to the maximum preset value (in our example resistance level 10). Despite of automatic resistance level regulation you can use the buttons     to adjust the resistance manually at any time.

If you wish to train with an activated pulse control you require a *pulse monitor by ear clip (item no. 275) or by chest belt (item no. 276)* as well as the receiver within your MOTOmed operating panel.

In order to optimize the function of your ear clip you should massage the complete ear including ear lap to increase the blood circulation (at the beginning of your training or if the heart blinks orange, page 40). Furthermore do not place the ear clip on the cartilage. Attach the cable to the collar of your shirt using the secure clip.

Following additional information is displayed within the MOTomed Cardio16 pulse control on the training screen (fig. 48):

- ①  Menu selection with button ①
- ②  pulse monitor »good signal« (heart symbol green)
 pulse monitor »low signal« (heart symbol orange)
 »pulse exceeded maximum pulse limit« (red blinking heart symbol)
 If this value is exceeded for more than 15 seconds the MOTomed shuts off automatically.
-  pulse monitor »no signal« (heart symbol orange with no filling)
 pulse monitor »off« (gray heart symbol)
- ③ 103 current pulse frequency
- ④ pulse indication, MOTomed Cardio16 pulse control is activated
- ⑤ 110 lower pulse limit
- ⑥ 120 upper pulse limit
- ⑦ 12 preset resistance level (numeric)
- ⑧  current resistance level, adjusted by the MOTomed (graphic)
- ⑨ | preset resistance level (graphic)
- ⑩ 8 current resistance level, adjusted by the MOTomed (numeric)

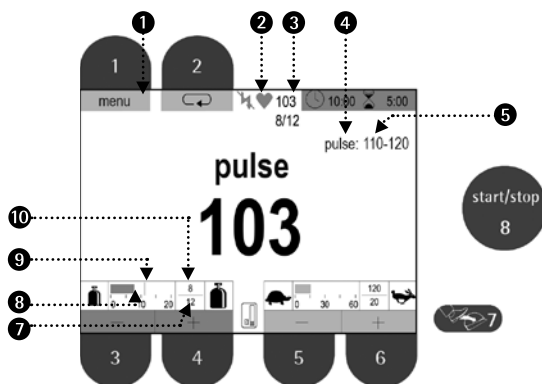


fig. 48

Adjustment of pulse control settings

see page 31 Basic settings of the pulse control are adjusted in the settings menu (in expert mode) at device settings in the submenu pulse control. These adjustments are valid for all training programs.

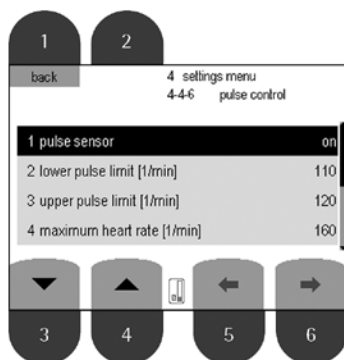


fig. 49

- 1 pulse sensor
- 2 lower pulse limit
- 3 upper pulse limit
- 4 maximum heart rate
- 5 automatic pulse calculation
- 6 regulation of pulse control

The following adjustments are available:

1 Pulse sensor

Activation, or deactivation of the pulse sensor.

In the settings menu (in expert mode) you can activate or deactivate the pulse control permanently for all training programs.

2 Lower pulse limit

If the pulse of the user falls below this value, the pulse control feature raises the resistance level (maximally up to the preset value).

3 Upper pulse limit

If the pulse of the user exceeds this value, the pulse control reduces the resistance level maximally down to one half of the preset value.

In order to **adjust the maximum limit** proceed as follows:

1. Go to the start screen and push button (2) »setup«.
2. Use the buttons (3)/(4) (▼/▲) in order to mark line 4 »device settings« and push button (6) »select« in order to switch into the submenu device settings.
3. Use the buttons (3)/(4) (▼/▲) in order to mark line 6 »pulse control« and push button (6) »select« in order to switch into the submenu pulse control (fig. 49).
4. Use the buttons (3)/(4) (▼/▲) to mark line 4 »maximum heart rate« and push button (5)/(6) (←/→) to select the desired value.
5. Push the red »start/stop« button (8) to return to the start screen.

4 Automatic pulse calculation

The MOTOMed is able to refer to the **date of birth** saved on the chip card to calculate the pulse limits (for a health orientated endurance training).

5 Regulation of pulse

In order to have the pulse control regulating the resistance level above the preset resistance level you can set the behavior of the pulse control to »increasing«. For this purpose, go to the device settings in the settings menu (in expert mode) and enter the submenu pulse control (line 6). Thus the gear increases up to plus one half of the preset value in case your pulse falls below the lower pulse limit (e.g. to gear 18 like shown in the example on page 40). Default setting is »relieving«.

see page 32

Activation of the pulse control during training

see page 18 The pulse control can always be activated or deactivated in the training menu. When starting the next training the settings will be as originally specified. You will still be able to change the lower, upper and maximum pulse value.

MOTomed sam2 Training Analysis Program (item no. 230)

The training analysis program »MOTomed sam2« is available for a sophisticated analysis, storage and graphical illustration of your training data. If you only wish to analyze your last training session you can use the simple print program »MOTomed sPrint«.

For this purpose a MOTomed chip card has to be inserted during training. The training data will be saved automatically to the chip card.



A training session of at least 20 seconds is required for the MOTomed to store the data. If a phase is interrupted before that no storage point will be created.

You can use the »MOTomed sPrint« in order to print out the most recent training session. Start the MOTomed desktop from the start menu. Possible screen savers will be turned off during the operation. With the keyboard function keys »F8-F12« you can choose between the different analyses. The data of your last training session will automatically be evaluated afterwards.

In »MOTomed sam2«, a more detailed analysis is available. The MOTomed sam2 Training Analysis Program comes with a short instruction manual and during operation you can refer to a comprehensive online guide (push »F1«) during the operation.

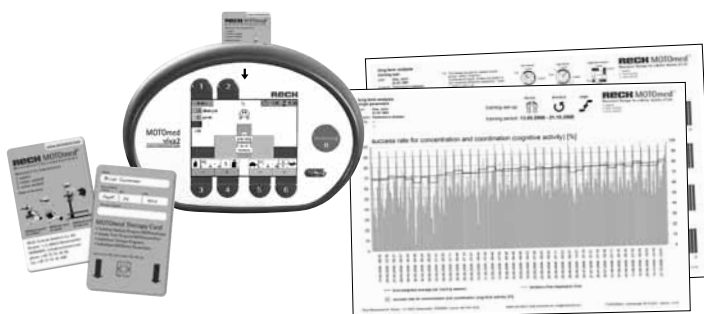


fig. 50

4-Segment CoordinationProgram (item no. 202)

When using the 4-Segment CoordinationProgram you have the possibility to specifically target and train in individual directions and toward muscle groups specifically. In this context various training tasks require different input, such as strength, endurance, coordination and concentration. Each pedal cycle is divided in 4 single segments according to the movement directions »push«, »down«, »pull« and »up« (fig. 51-fig. 53).

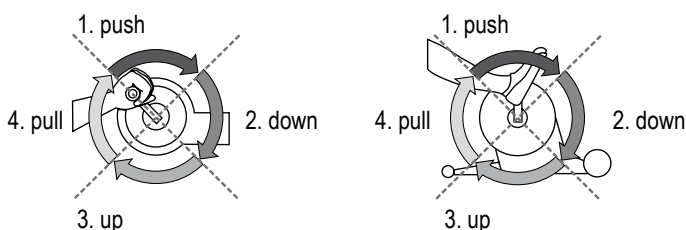


fig. 51/52

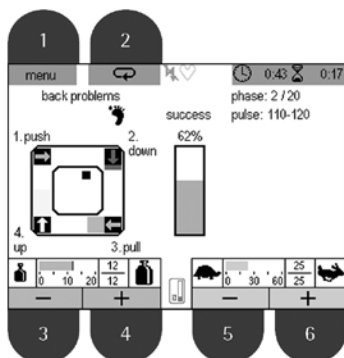


fig. 53

The length of the colored bars indicates the level of strength applied in the particular segment. With button ② (↺) the performance in Watts for each segment or each value displayed on the overview screen can be shown (fig. 17/fig. 18, page 16). Thereby, you always get a feedback about your training and can control,

adjust and improve your performance permanently. You are required to train with one specific side only (left or right). Let the other leg/arm be moved passively in order to achieve exact measurements.



Certain accessories may cause a false reading.

The 4 different segments (»push«, »down«, »pull« and »up«) can be trained separately, with each other or in different combinations (2 or 3 segments combined). A special success bar gives continuous feedback during training about how adequate you fulfill the task (given by the segment combination) (fig. 53).

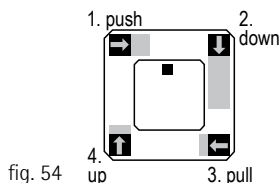


fig. 54

There are 15 different segment combinations available for the coordination training.

The following segment combinations can be selected as training tasks:



Segment version 0 All 4 segments should be trained equally, if possible only with one active side, e.g. if only the right or left side is required (right or left hand or leg icon indicated on the screen). When pedaling only with one side, the strongest or weakest muscle group (segments) of each side is displayed, detected, or documented. Weaker muscle groups can be improved simultaneously, and muscle force can be adjusted if necessary.



Segment version 1-4 Muscle strength shall be applied on a single segment per revolution (e.g. »push«). All other muscle groups remain passive, and are therefore continuously supplied with blood.



Segment version 5-6 (two opposite active segments).



Segment version 7-10 (two subsequent active segments).



Segment version 11-14 (three subsequent active segments).

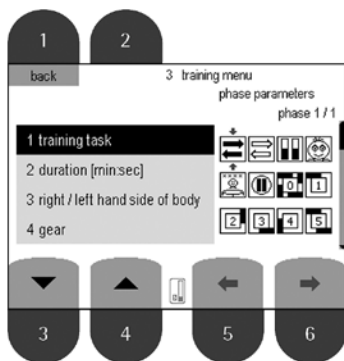


fig. 55

In order to train a sequence of different segment versions (or training tasks) you can create an optional program on your own (chapter »edit programs«, page 24). If you wish to adjust training tasks during the training, you need to be in the expert mode:

- Push button ① »menu« during the training and mark line 1 »training task« in the expert mode training menu (fig. 55).
- By pushing the buttons ⑤/⑥ (←/→) you can select the desired task.
- Exit the menu and continue your training by pushing button ① »back« (settings will be saved for the current training).

Index

A

accessories 33
additional programs 33
adjust contrast 21
alternating display information 16
analysis 20

C

Cardio16 pulse control 39
champion points 11, 14
chip card menu 33
coordination program
4-Segment 44

D

date/time 21
device settings 21, 31
direction 18
duration 18
duration of training 18

E

edit programs 24
expert mode 22

F

foot insertion aid 7
freeze display 16

H

heart symbols 17, 40

J

jumps for joy 10

K

key lock 17

L

language option 21
load default settings 31
loosening program 15

M

menu structure 8
MotivationProgram MOTOmax 10
MotivationProgram
TRAMPOLINEmax 12
MovementProtector 18

O

operating modes 6
operation 6

Index

P

passive speed 16
performance control 19
performance control
(automatic) 19
phase parameters 26
program menu 9
program packages 22
program parameters 25

Q

quick start 7

R

resistance levels 16

S

segment versions 45
settings menu 21
SpasmControl 18, 19
spasticity (cramps) 18
standard mode 6
standard program 10
stand-by mode 6
starting parameters 20
start program 32
start screen 6, 7
strengthening and
endurance program 15

T

Training Analysis Program 43
training menu 18
training screens 16
training tasks 26
TRAMPOLINEmax 12

U

user guidance 8

V

volume 21

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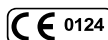
User Guide

MOTomed viva2, *Motomed gracile 12*

MOTomed letto2



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