HASOMED

RehaCom®

Cognitive therapy

RehaCom - Basic manual

www.rehacom.com

HASOMED RehaCom®

Cognitive therapy

by Hasomed GmbH

This manual contains information on using the RehaCom therapy system.

Our therapy system RehaCom delivers tested methodologies and procedures to train brain performance.
RehaCom helps patients after stroke or brain trauma with the improvement of such important abilities like memory, attention, concentration, planning, etc.

Since 1986 we develop the therapy system progressively. It is our aim to give you a tool which supports your work by technical competence and simple handling, to support you at clinic and practice.

User assistance information:

Please find help on RehaCom website of your country. In case of any questions contact us via e-mail or phone (see contact information below).

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Dear user,
please read the entire instruction manual before trying to operate RehaCom.
It's unsafe to start using RehaCom without reading this manual.
This manual includes lots of advice, supporting information and hints in order to reach the best therapy results for the patients.

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1 Safety information

1.1 General warnings and cautions

To ensure maximum safety, please observe the following warnings and safety instructions:

WARNING: Read the instructions for use before using the medical device for the first time.

WARNING: All individuals using RehaCom must be qualified, understand the therapeutic approach, and be familiar with the system.

WARNING: RehaCom may only be used by – or on the instruction of – a doctor, psychologist, occupational therapist, or speech and language therapist.

WARNING: The screening modules of RehaCom are not intended to serve as diagnostic procedures.

WARNING: All information provided by the software is not intended for planning further therapeutic or diagnostic measures.

WARNING: Healthcare providers who process or transmit health data are obliged under the General Data Protection Regulation (GDPR) (Regulation (EU) 2016/679) in the EU and HIPAA in the USA to implement appropriate technical and organisational measures to ensure a suitable level of security for the protection of personal data – particularly to prevent unauthorised access, disclosure, alteration, or loss.

WARNING: The RehaCom keyboard (patient keyboard) must not come into direct contact with other electrically conductive materials.

WARNING: The RehaCom computer must be connected to a properly installed and earthed socket using a three-core power cable.

WARNING: The RehaCom keyboard (patient keyboard) is not protected against explosive substances. Do not use RehaCom near flammable anaesthetics or gases.

WARNING: To ensure the safe operation of the RehaCom keyboard (patient keyboard), it must not be exposed to high humidity or strong electrical or electromagnetic interference.

WARNING: Disconnect the RehaCom keyboard (patient keyboard) from the PC before opening it for any reason.

WARNING: Disconnect the RehaCom keyboard (patient keyboard) from the PC

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before disinfecting it.

WARNING: Do not make any modifications to HASOMED products. Any alterations to the device will void the warranty.

CAUTION: In patients with severe depressive symptoms, close clinical monitoring of their mental state is required during software use. Cognitive training may trigger frustration or reinforce negative thought patterns, particularly in cases involving suicidal ideation. The software must not be used as a substitute for medical or psychotherapeutic treatment and should only be used under professional supervision.

CAUTION: Patients with suspected or diagnosed photosensitive epilepsy may only use the software under the supervision of qualified professionals or a responsible caregiver. Although the software is visually designed to be low in stimulation, individual sensitivity may vary. If symptoms such as discomfort, visual disturbances, or seizures occur, training must be stopped immediately and medical assessment initiated.

CAUTION: Take regular breaks. If signs of overload such as headaches, discomfort, or fatigue occur, stop or interrupt the training session.

CAUTION: Activate patient mode when the patient is in the room unsupervised during training to improve data protection.

CAUTION: To protect sensitive data, enable password protection for therapists when patients are training unsupervised, and close the application after the session.

CAUTION: Risk of infection. Use damp disinfectant wipes to clean the table surface, RehaCom keyboard (patient keyboard), mouse, touchscreen, and/or headphones before use by a new patient.

CAUTION: The RehaCom keyboard (patient keyboard) must not be sterilised using gas. The PVC housing may react with the gas and form highly toxic ethyl nitrite. Sterilisation using an autoclave, ultrasound, or gamma radiation is also not permitted.

CAUTION: Only use cables or components recommended by HASOMED to connect the RehaCom keyboard (patient keyboard) to the PC.

CAUTION: Do not place the RehaCom keyboard (patient keyboard) on heat-emitting surfaces or expose it to direct sunlight.

CAUTION: Do not operate the device in bathrooms or other areas with high moisture risk. The RehaCom keyboard (patient keyboard) is not splash-proof.

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CAUTION: Do not expose the device or cables to mechanical or thermal stress. Avoid temperatures above 40 °C (100 °F).

IMPORTANT NOTICE: All serious incidents that occur in connection with the product must be reported to the manufacturer and the competent authority of the Member State in which the user and/or the patient is established.

1.2 Inteded use

RehaCom is used for:

Monitoring of cognitive training in the following domains:

- Attention
- Memory
- Executive functions
- Visual field

Hinweis: Diagnostics (e.g., diagnosis of cognitive functions) is **no intended use.**

Software-based training as part of the therapy of

- Attention disorders
- Memory disorders
- Disorders of executive functions
- Impairments after visual field failure, disorders of visuo-spatial functions and neglect

Non-medical purposes

- Alignment of treatment with guidelines and recognised standards
- Adherence
- Health competency
- Patient sovereignty
- Management of disease-related difficulties in everyday life

Intended Patient Group

Monitoring of cognitive training in the domains of attention, memory, and executive functions

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Indications

- Cognitive disorders after the following diseases or injuries affecting the central nervous system:
    - Stroke
    - Traumatic brain injury
    - Multiple sclerosis
    - Parkinson‘s disease
    - Mild Cognitive Impairment (MCI)/ Dementia (mild)
    - Covid-19
- Cognitive deficits within the following mental and behavioural disorders:
    - Depression
    - Schizophrenia
    - Mental and behavioural disorders due to psychoactive substance use

Contraindications

- None

Caution for patients with

- Severe depressive symptoms
- Suspicion or diagnosis of photosensitive epilepsy

Monitoring of cognitive training in the domain of visual field

Indications

- Cognitive disorders after the following diseases or injuries affecting the central nervous system:
    - Stroke
    - Traumatic brain injury
    - Multiple sclerosis

Contraindications

- None

Caution for patients with

- Suspicion or diagnosis of photosensitive epilepsy

Software-supported training as part of the therapy of attention disorders, memory disorders and disorders of executive functions

Indications

- Cognitive disorders after the following diseases or injuries that affect the central nervous system:
    - Stroke

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  - Traumatic brain injury
  - Multiple sclerosis
  - Parkinson‘s disease
  - Mild Cognitive Impairment (MCI)/Dementia (mild)
  - Covid-19
- Cognitive deficits in the context of the following mental and behavioural disorders:
  - Depression
  - Schizophrenia
  - Mental and behavioural disorders due to psychoactive substance use

Contraindications
- None

Caution for patients with
- Severe depressive symptoms
- Suspicion or diagnosis of photosensitive epilepsy

Software-supported training as part of the therapy of impairments after visual field failure as well as disorders of visuo-spatial functions, and Neglect

Indications
- Cognitive disorders after the following diseases or injuries that affect the central nervous system:
  - Stroke
  - Traumatic brain injury
  - Multiple sclerosis
  - Parkinson‘s disease
  - Mild Cognitive Impairment (MCI)/Dementia (mild)

Contraindications
- None

Caution for patients with
-
- Severe depressive symptoms
- Suspicion or diagnosis of photosensitive epilepsy

Intended User

Monitoring of cognitive training in the domains of attention, memory, executive functions, and visual field
- Professional users

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(medically trained and instructed personnel);
- Non-professional users (laymen), under the following conditions:
    - Users are psychologically, cognitively, intellectually, and motorically able to understand and operate the product

Users carry out the screening modules in the presence of a therapist.

Software-supported training as part of the therapy of attention disorders, memory disorders, executive functions, impairments after visual field failure, visuo-spatial functions and Neglect, as well as visuo-motoric functions

- Professional users (medically trained and instructed personnel);
- Non-professional users (laymen), under the following conditions:
    - Users are psychologically, cognitively, intellectually and motorically able to understand and operate the product or have support from their caregivers

Intended application environment

Professional healthcare facilities as well as home healthcare environment
- Safe, patient-friendly environment

➔ should protect the patient from external influences and provide for concentrated work

1.3 Description of the RehaCom system

RehaCom – Computer-assisted cognitive therapy

RehaCom is a scientifically evaluated therapy system designed to support cognitive functions in patients undergoing neurological and psychiatric rehabilitation. It was developed for use by qualified professionals as part of multimodal treatment approaches.
The decision to use RehaCom is made by the treating specialist based on clinical assessment and diagnostic findings. RehaCom is a therapeutic aid and does not replace medical or therapeutic evaluation.

System structure and operation

The software consists of a base programme for managing patient data and modules, along with specialised screening and therapy modules. It runs on Windows™-based PCs and can be operated – depending on the module – using a keyboard, mouse, or touchscreen. For patients with significant impairments, a specially designed patient keyboard (RehaCom Keyboard) is recommended.
The modules are designed in such a way that even individuals with severe cognitive impairments can use them independently. During therapy, individual adjustments can be made – such as selecting specific modules or difficulty levels – to tailor the

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training to the specific needs of each patient. These settings are intended to optimise the training and do not constitute therapeutic decisions in the narrower sense.

Limitations of use and data handling

The data generated by RehaCom support the adjustment of training content but are not suitable for diagnostic purposes or deriving therapeutic decisions. Screening modules may be used to monitor progress over time but do not replace clinical diagnostics.

Duration and frequency of use

- Indication-specific, in line with current guidelines for cognitive training
- Duration of each training session: 30–60 minutes, 2–5 sessions per week
- These guideline values may be exceeded or reduced depending on the patient's resilience and training goals.

PC with RehaCom software and panel (patients keyboard)

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1.4 Environmental conditions

Cognitive therapy must be performed in a safe, patient-friendly environment. The environment must protect the patient from external influences and allow a concentrated work.

For working with RehaCom a standard office environment is needed.

The office environment is a combination of light, temperature, humidity and air quality. Most patients work comfortably at temperatures between 20°–26° C (70°-80° F).
The optimum comfort range for relative humidity is 40%–60%. Low humidity can cause dryness of the eyes, nose and throat. Relative humidity above 80% can be associated with fatigue and reports of ‘stuffiness’.

Work surface height
Adjust the height of the work surface and/or the (wheel-) chair so that the work surface is approximately at finger length below the height of the elbow when seated.

Chair
Adjust the seat tilt so that the patient is comfortable when using the keyboard. Usually this will be close to horizontal but tilted slightly forwards. If this places an uncomfortable strain on the leg muscles or if the feet do not reach the floor then a footrest should be used. Adjust the backrest so that it supports the lower back when the patient is sitting upright.

RehaCom Keyboard / keyboard placement
Place the RehaCom Keyboard (patients' keyboard) in a position that allows the forearms to be close to horizontal and the wrists to be straight. That is, with the hand in line with the forearm. If this causes the elbows to be held far out from the side of the body re-check item work surface height. The patient should have the opportunity to lay down his/her forearms in front of the RehaCom Keyboard.
The therapist should place his/her keyboard beside the RehaCom Keyboard, but with direct sight to the screen.

Screen placement
Set the eye-to-screen distance at the distance that permits the patient to most easily focus on the screen. Usually this will be within an arm’s length. Set the height of the monitor so that the top of the screen is below eye level and the bottom of the screen can be read without a marked inclination of the head. Usually this means that the center of the screen will need to be near shoulder height.

Screen size
Often patients with cognitive deficits suffer from a lot of other impairments like impaired eyesight. Because of this reason, the usage of a large monitor (24" 16:9) is recommended. For visual field therapy, the therapist should use a projector in a darkened room.

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Speakers / headphones

RehaCom gives acoustic feedback to inform the patient in case of errors and misbehavior. Some instructions are given by voice. For this reason a device for sound output is needed.
If more than one patient is treated in a single room, the acoustic feedback can be switched off or the patient may use headphones (for patients without craniocerebral trauma, if it's convenient, don't forget disinfection!).

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1.5 System Requirements and IT Security Measures

Data security

All personal data is encrypted within the RehaCom database. The database is password protected.
Data is transferred to the home training server in encrypted form via https.
Passwords with up to eight characters are stored on the server.
To create a password that is as secure as possible, use eight characters. Use upper and lower case letters, special characters and numbers.

Within the clinic network, the respective IT department is responsible for further data security.

Minimum requirements for the computer

Operating system: Windows™ 10 Version 1803 (current version during testing: 1903)
Graphics card: DirectX™ 10.1 compatible; Intel HD530 or higher; at least 2 GB graphics memory
Processor: Intel Core i3, i5, i7 6th generation or equivalent
Memory: 4 GB RAM
Hard disc: 100GB of free space
Sound card: is needed - additional to that - a suitable head set and/or speakers
Screen: screen size depends on the patient's needs; at least 19", 16:9
Screen resolution with text size 100% (standard): 1024x768
Screen resolution with text size 125%: 1280x1024
Screen resolution with text size 150%: 1920x1080 (Full HD)
Disc drive: DVD drive for software installation (alternative: installation via USB/ Network possible)
Keyboard: It is recommended to use the RehaCom Keyboard

Data Security

All personal data is encrypted within the RehaCom database. The database is password-protected.
Data transfer to the home training server is encrypted via https.
Within the clinical network, the respective IT department is responsible for ensuring further data security.

1.6 Setup instructions

Install software first!

Before connecting any device to the computer: install the software.
A computer with Windows™ operating system is needed, the access rights of an **Administrator** are needed to install the software.

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Insert the RehaCom install DVD into the drive, wait until Windows™ opens autorun information.
(If "autorun" is deactivated, open Explorer, double-click on DVD drive icon.)

Choose "Setup(.exe)" to run installation.

During installation one can choose which components should be installed:

Standard
All available RehaCom modules will be installed.

Custom
The therapist can deselect therapy modules which are not needed.

Network installation
RehaCom is installed on a server at hospitals network. Only some locally needed system components are installed. Ask your network administrator for advice!

After installation: Connect the devices before the first RehaCom start!

Starting RehaCom for the first time, the software searches for devices (e.g. RehaCom Keyboard (patients keyboard) or licensing device (dongle)).
If your delivery contains a device (RehaCom Keyboard or dongle) please connect to any available USB port.

Start RehaCom!

When first starting RehaCom, the **User Mode** is adjusted. Here you can set up to use RehaCom either as a therapist or as a patient (at home).
When HIPAA data security features have to be enabled, you must use RehaCom with "Therapist's data" enabled.

1.7 Setting up RehaCom

First steps to use RehaCom

1) Before you start RehaCom connect needed devices to the computer. (Devices are the RehaCom Keyboard (patients' keyboard) or a Dongle for licensing). When you start RehaCom for the very first time a database is created. This may take a few minutes, please be patient. The database contains all RehaCom data in a single file: therapists, patients, module setup, the history of screenings and therapy as well as all results. Initially the database is saved on your local harddisk at directory "c:\RehaComDB". Each RehaCom workstation has its

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own data. In hospitals it may make sense to save the data in a central server database. Please refer to chapter Network installation and ask your administrator.

2) As a second step RehaCom opens the window "User mode". By default choose "therapist, no external clients". If there is more than one therapist in you facility, please check "Use therapist's data".

3) When "Use therapist's data" was checked, the therapist "Administrator, ---" is shown. This therapist has the right to administer and see all patient data. For data security reasons this therapist should not be used for daily work.

4) Use the "Therapist" button to create a new therapist, or later to choose another therapist. In order to work HIPAA conform, the therapist should login to RehaCom. To enable therapists login use buttons "System", "Settings", check "Therapist must login".

5) Before you can start any screening or therapy module you must set up a first client. Use button "Clients". All fields with a green background must be filled in. Save client's data by clicking "OK". Now you can start the screening or therapy.

6) RehaCom offers a lot of therapy modules. In order to choose the right module the therapist should have diagnosed the patient first. Options for RehaCom screenings are described in the chapter "Use of RehaCom screening modules". When you want to perform a screening, choose the tab "Screening". Here you can see a list of available screening modules. To get detailed information about the different screenings right-click on a module and choose "Help *module name*". Start a screening by double-clicking or via the "Start" button. When you start a screening or therapy module for the very first time, the programme will ask for the "Licensing mode". All licensing modes are explained in the corresponding chapter. After completing a screening module the results can be found by pressing the "Results" button. In case the screening has found any disorder, the related therapy module can be started directly.

7) Working with therapy modules: When a disorder was discovered through screening or therapy, you can select the appropriate therapy module in the "Training" tab. To get detailed information about the different therapy modules, right-click on a list entry (module name) and choose "Help *module name*". Start a therapy module by double-clicking or via the "Start" button. When you start a screening or therapy module for the very first time, the programme will ask for the "Licensing mode". All licensing modes are explained in corresponding chapter. When starting a therapy module, the "Therapist menu" is shown. Here you can set up details of therapy. The training starts by clicking one of the "Start ..." buttons, a "start window" of the therapy module appears. At this point the setup by the therapist ends and the client's part of work begins.

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8) The client works with the therapy module. All therapy modules work in a self-adaptive way; which means that the level of difficulty of the training changes automatically, according to the client's needs. After a set time (duration of training, changeable in "Parameters"), the training ends and the results are shown.

9) Evaluate the therapy results: After every therapy session, the results can be evaluated. Successes and errors can be discussed with the client and new goals can be set. All screening and therapy data is saved to the database automatically, so the complete process of the therapy is available at all times. After 2 weeks of training (or at least 10 therapy sessions), the screening can be repeated in order to examine the client's performance/improvement.

Hints for new RehaCom users

Screening modules: Having a client perform all screening modules in one session is too strenuous. You may get a good overview on attention problems with "Spatial numbers search", on memory problems with the "Working memory" screening.

Therapy modules: When you are not sure about your client's disorder, start with attention training followed by memory training. Train executive functions last.
For most clients with severe attention deficits, the module "Attention and concentration" may be a good fit, patients with mild cognitive deficits like to use "Divided attention 2".
For most clients with severe memory deficits, the module "Figural memory" can be used, patients with mild cognitive deficits like to use "Working memory".

Each therapy module has parameters to change its behaviour (choose the module and click the "Parameter" button). If you sense a module "not fitting" your client (e.g. the working speed may need to be adjusted) you can change a lot of settings! There is no need to worry about doing something wrong since all adjustments can be reverted at any time by pressing the "Default" button .

After the first installation of RehaCom, you can try out the complete system for a limited time. To get information about when your tryout licences expires, click on "System", "Licence". At the licence window all licensed modules are listed.
To purchase RehaCom licences, please contact your local RehaCom partner. He will send you a licence CD (or file) which can be loaded by clicking the button "CodeDisk".

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1.8 Operating instructions

Using RehaCom is very easy. Aside from sources of help, available in all RehaCom components (pressing button F1), this manual gives basic information. Knowing this manual is precondition for an efficient use of RehaCom.

Before working with RehaCom it is necessary to make some adjustments. You can find them in the chapter Setting up RehaCom.

The chapter Crash course RehaCom gives a short introduction enabling you to work with RehaCom.

For every RehaCom module there is a special manual which

- in a theoretical part describes the cognitive function to be improved,
- lists relevant patient groups,
- describes the specific design of the training, the feedback, the levels of difficulty and the training parameters, and
- makes suggestions about how to analyze the process data in order to ensure the best possible training strategies.

Further information on computer-assisted cognitive rehabilitation and rehabilitation strategies can be found in the chapter Theoretical principles.

1.9 Cleaning

All devices which come into contact with patients have to be cleaned and disinfected before and after every use.
Please use wet disinfection wipes to clean the desktops, (patients') keyboards, mouses, headphones and/or touchscreens.

1.10 Manufacturer Information

Product Information

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RehaCom Classic

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SRN: DE-MF-000006439
IK-Num.: 591530844

1.11 Warranty

Warranty services policy & procedures

HASOMED offers warranty service for all products. Below is a description of the services offered for the various product groups:

HASOMED products carry a full warranty for the period specified. Some HASOMED products carry different warranty periods due to the nature of the product's design, manufacture or expected use, the warranty applies from the date of purchase by the first customer.

General Terms & Conditions

1. The warranty is valid only by presentation of the proof of purchase consisting of original invoice or sales slip indicating the date of purchase, dealer's name, model and serial no. of the product. HASOMED reserves the right to refuse warranty if this information has been removed or changed after the original purchase of the product from the dealer.
2. HASOMED's obligations are limited to repair of the defect or replacement of the defective part or at its discretion replacement of the product itself.
3. Warranty repairs must be carried out by a HASOMED Authorised Service Centre. Warranty cover will be void, even if a repair has been attempted by any unauthorised service centre. HASOMED shall not be liable for reimbursements, claims and damages that may result from the unauthorised repair of the product.
4. Repair or replacement under the terms of this warranty does not provide the right to extension or renewal of the warranty period. Repair or direct replacement of the product under the terms of this warranty may be full filled with functionally equivalent service exchange units.
5. The warranty is not applicable to cases other than defects in material, design and workmanship.

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The warranty does not cover the following:

- Periodic checks, maintenance, repair and replacement of parts due to normal wear and tear.
- Abuse or misuse, including but not solely limited to the failure to use this product for its normal purposes or in accordance with HASOMED's instructions on usage and maintenance. Defects resulting from usage of the product in conjunction with accessories that are not approved by HASOMED for use with this product.
- Failure of the product arising from incorrect installation or use not consistent with the instructions and technical or safety standards prescribed in the product user manual.
- Accidents, Acts of God, lightning, water, fire, public disturbances, improper ventilation, voltage fluctuations or any cause beyond the control of HASOMED.
- Unauthorised modifications carried out to the product in order to comply with local or international technical standards in countries for which this HASOMED product was not originally designed.

6. This warranty does not affect the consumers' statutory rights nor the consumers' rights against the dealer related to their purchase/sales agreement.
7. This warranty is not transferable. This warranty will be the purchasers' sole and exclusive remedy and neither HASOMED nor its service centers listed in this warranty document shall be liable for any incidental or consequential damages or breach of any express or implied warranty of this product.

DISCLAIMER:
HASOMED shall not be liable for the loss of any saved/stored data in products that are either repaired or replaced.
The above policies are for warranty service and the customer will be responsible for any costs associated with non-warranty conditions. HASOMED reserves the right to make final decisions regarding problem determination and the appropriate service option. Exchange units assume the remaining warranty of the original product.
Please refer to your HASOMED Limited Warranty Statement for complete terms and conditions, as some models have other terms and conditions. Some limitations and restrictions apply and these programs are subject to change without prior notice.

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1.12 Decommissioning

Correct disposal of RehaCom Keyboard (patients keyboard)

(Waste Electrical & Electronic Equipment, Applicable in countries with separate collection systems)
This marking on the product, accessories or literature indicates that the product and its electronic accessories (e.g. USB cable) should not be disposed of with other household waste.
To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate these items from other types of waste and recycle them responsibly to promote the sustainable reuse of material resources.
Household users should contact either the retailer where they purchased this product, or their local government office, for details of where and how they can take these items for environmentally safe recycling.
Business users should contact their supplier and check the terms and conditions of the purchase contract. This product and its electronic accessories should not be mixed with other commercial wastes for disposal.
This EEE is compliant with RoHS.

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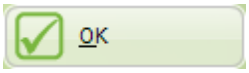
2 Introduction

2.1 Crash course RehaCom

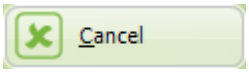
In the chapter "Summary" you have learned the first steps in RehaCom. Now let's have a closer look at some details.

One of the most obvious advantages of a system like RehaCom is that by knowing certain identical keys the therapist is able to quickly manage the system. In a few steps these keys are explained now.

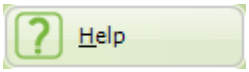
These keys always have the same function:



closes the window ***applying changed values***



closes the window ***ignoring changes***. Alternatively Esc can be used.



opens up a help window giving information about content and function of the current window. Alternatively you can press F1 or the ***question mark ?*** in the upper right corner of any window.

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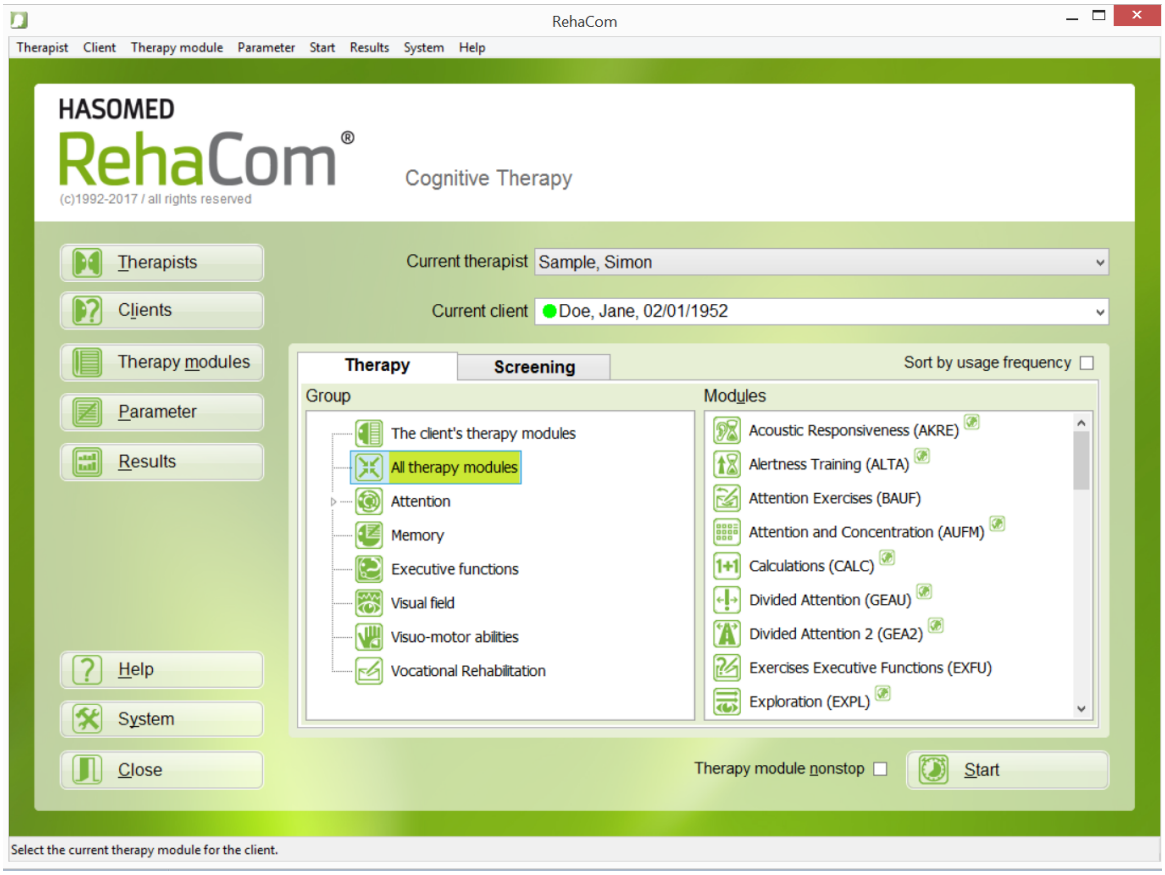
After starting RehaCom this main window appears.

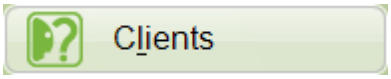


Main w indow RehaCom.

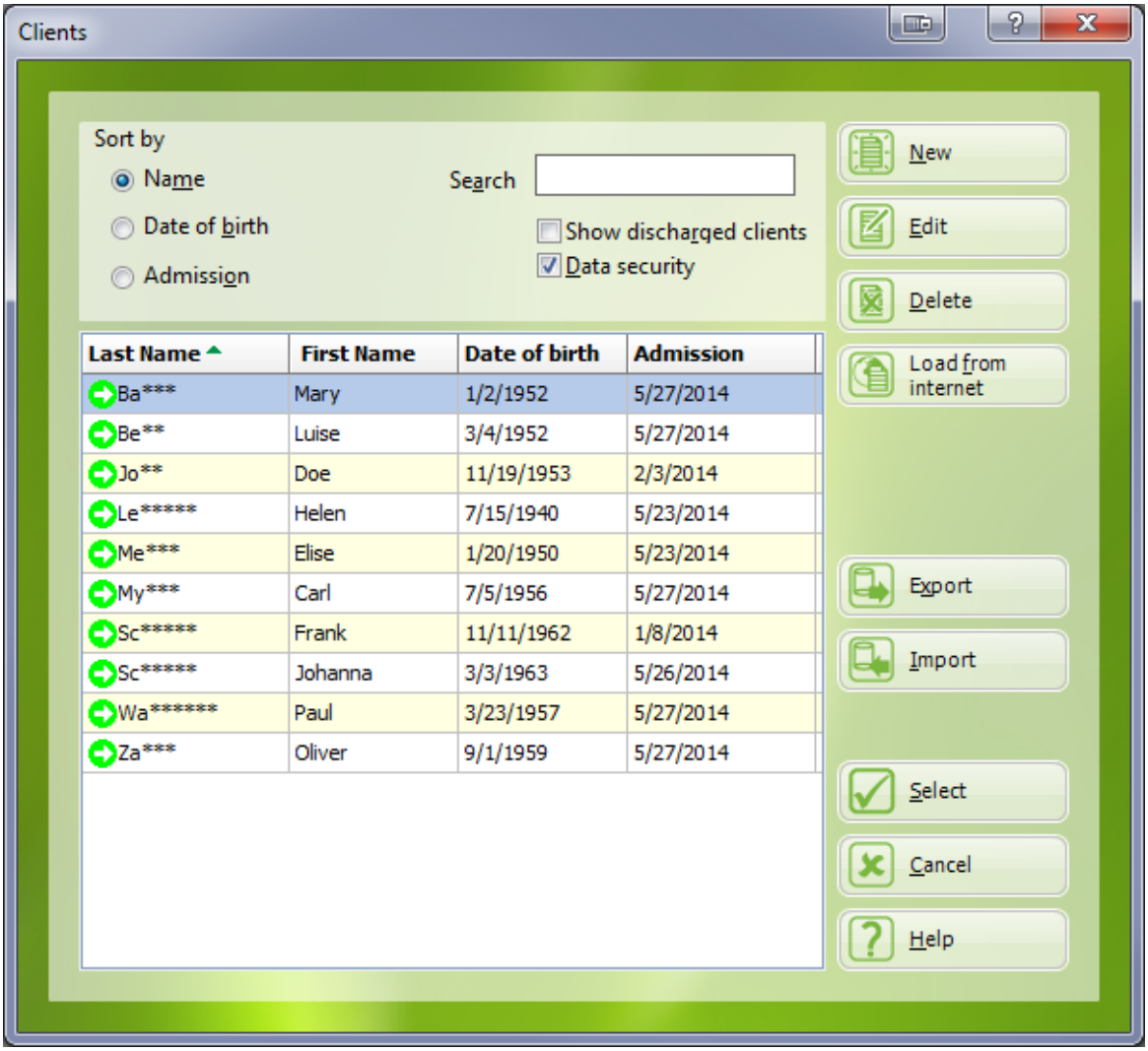
In order to work with RehaCom, the following steps are always essential:

- enter or choose a therapist
- enter a client into the RehaCom database,
- choose a module for a client,
- execute the training and
- analyse the results.

In order to enter a client into the data base, press the button



The window **Clients** opens up.



Window Clients.

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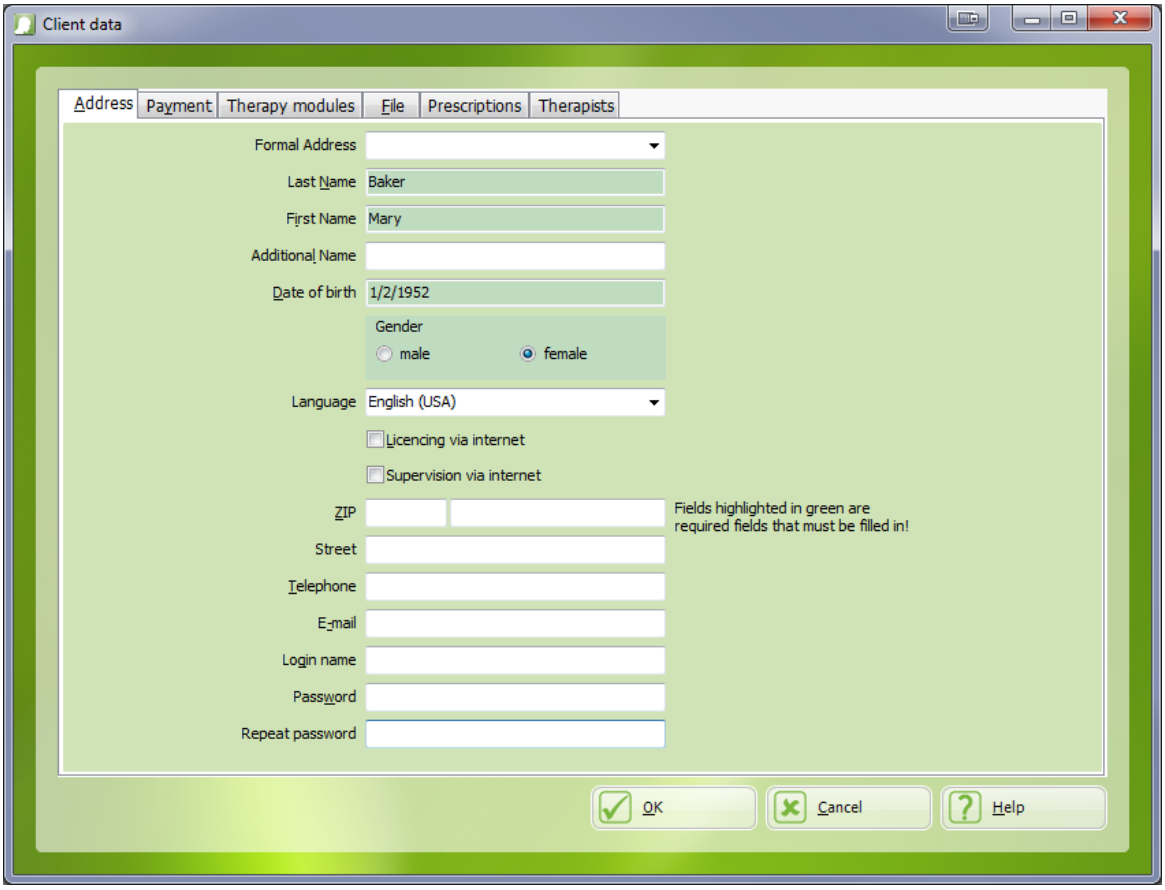
In order to enter a new client, press **New**. The window **Client data** appears.



Window Client data.

Enter at least the client's **Name, First Name, Date of Birth** and the client's **Gender** and press **OK**. Now the main window will show up with the new client you just entered in the field **Current client**.

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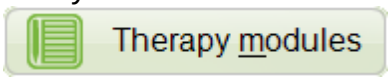
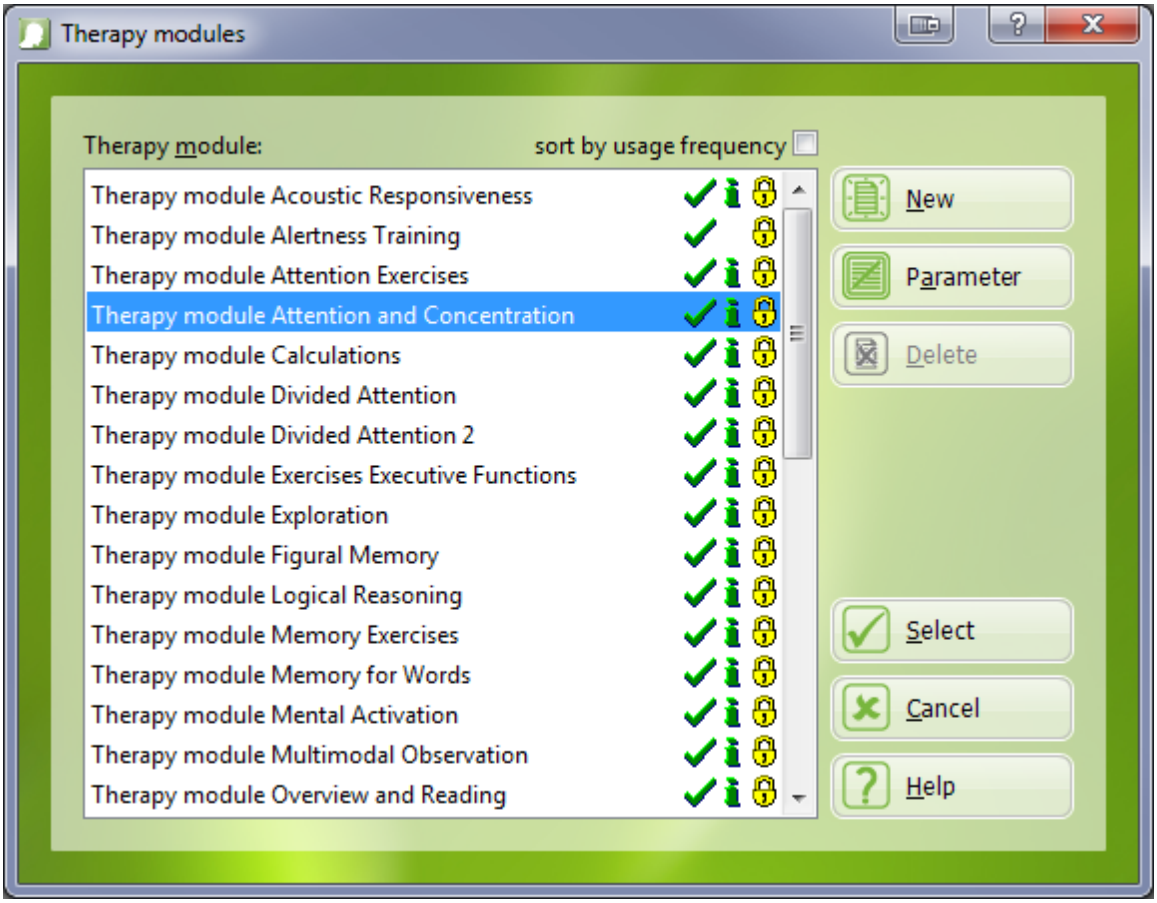
Now you need to choose a therapy module for the client by pressing



The window **Therapy Modules** opens up.



Window Therapy Modules.

The desired therapy module is chosen from the list by double clicking.

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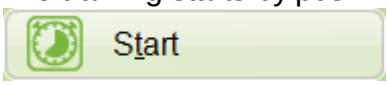
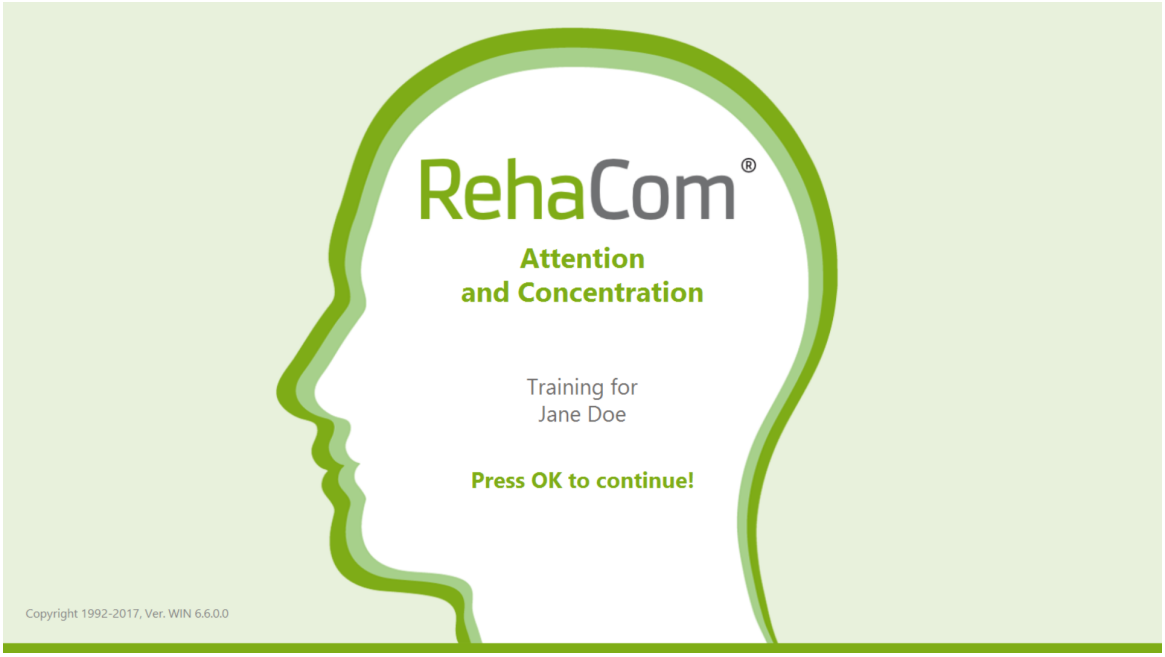
The training starts by pushing



A starting picture specific to each module appears.



Example: Starting picture of the module "Divided attention" for the client Simon Sample

For control purposes, the name of the RehaCom module and the client's name are displayed. To start training, push the RehaCom Keyboard **OK**-button.
Each module is described in a separate special manual.

Each training session consists of an instruction part and the actual training.

A client's first two sessions with a new module automatically include instructions with an explanation of the task, how to use the RehaCom Keyboard, and further specific aspects. For clients with severe deficits and people with impaired sight, these instructions can serve the therapist as a basis for extended explanations. In many modules, the client is instructed via "learning by doing". The instruction can be started any time in the therapist menu with the button **Start with instruction**.

Then the first training task starts. Some keys of the RehaCom Keyboard have the same function in all modules:

- RehaCom Keyboard OK-button: move on to the next instruction or confirm an input
- yellow **plus "+"**-button: the last spoken instruction will be repeated.
- cursor buttons or joystick: moving the cursor within the module.

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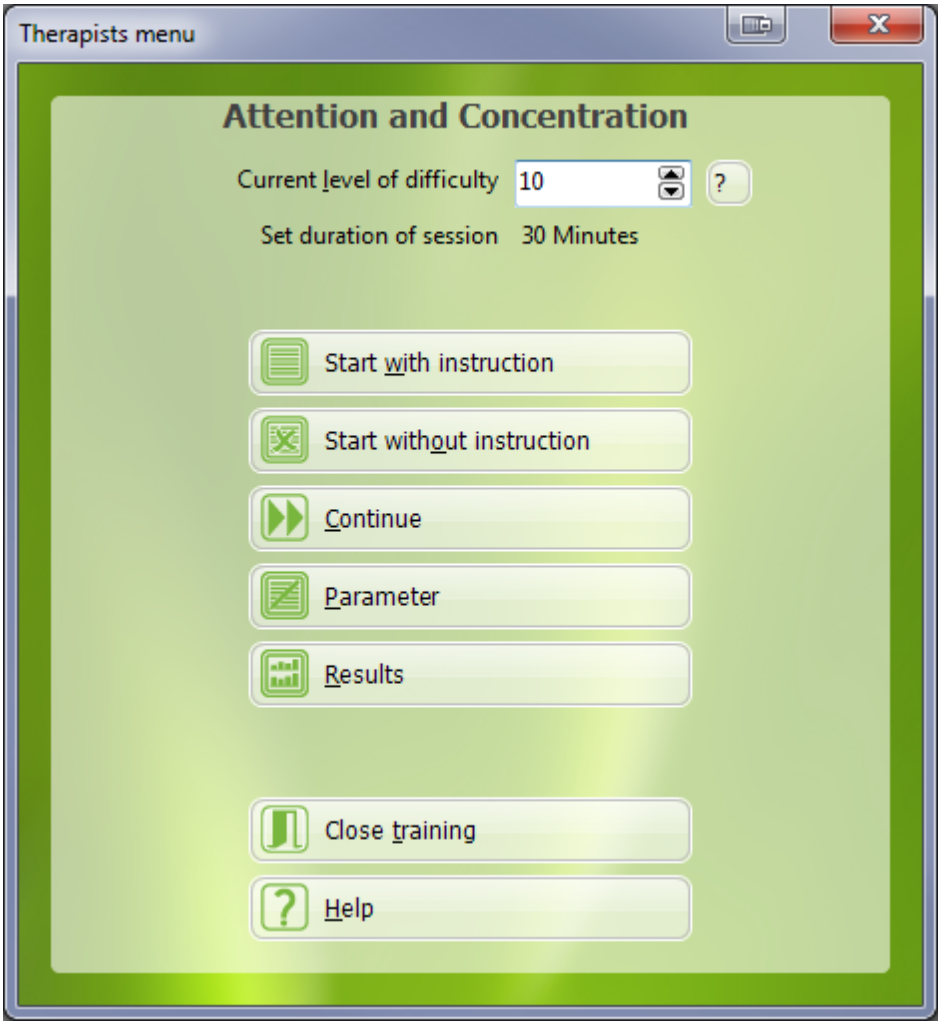
In order to interrupt the session, there are two possibilities:

- the client presses the red **minus "-"** -button on the RehaCom Keyboard. He/ She can have a break, then continue the training or go through the instructions once more. The session time keeps running during pauses not to disrupt the clinical flow.
- the therapist interrupts the training with **Esc** on the PC keyboard. ***Progress data of the current task will be lost***. The therapist menu appears.



Therapist menu.

In the upper part of the therapist menu the **Current level of difficulty** is displayed and can be changed. Information about the current duration of session is shown.

Pressing **Start without instruction** starts the current module anew. Progress data acquired in this session will be lost. **Start with instruction** includes the instruction phase as described above. By pressing **Continue** the session is continued with the

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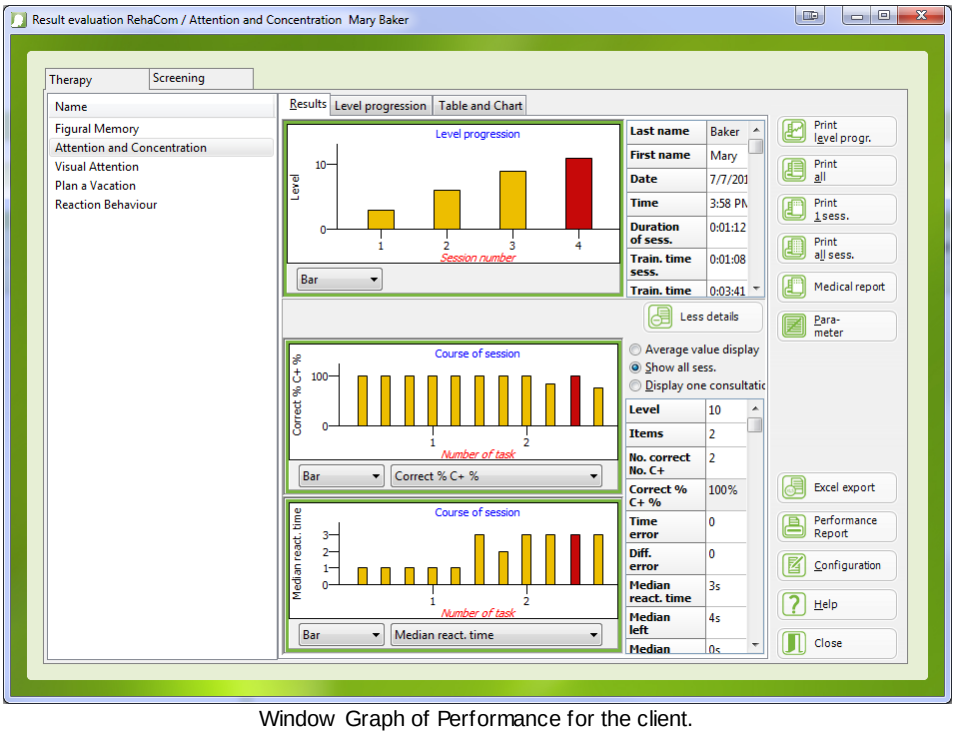
next task.

The button **Parameter** allows module specific parameters to be adjusted (see Training parameters). In addition to the module's ability to adapt, further adjustments to the client's performances can be conducted. The manual of each module provides detailed information about it.

The button **Results** shows an analysis of the process data acquired so far. The therapist can recognise and influence deficits and capacities in the client's performance during the training already (see chapter Analysis of process data)

Finally, the **Close** button allows you to cancel the training of a module (in case a training unit (battery) consists of several modules, then the button Close therapy module is visible).

When the set time is over, the training will be finished. If the checkbox Non-Stop is not marked in the main window, a graph of performance appears, documenting the progress from session to session with simple bars. The higher the bar, the higher the performance achieved. On this basis the therapist conducts the final talk with the client about the session with comments on the current performance and discussion of strategies of further trainings. More detailed information for the therapist can be found in the file **Results** allowing exact deficit analysis (see Analysis of process data).



Window Graph of Performance for the client.

Crash course RehaCom only provides a short overview about how to use the

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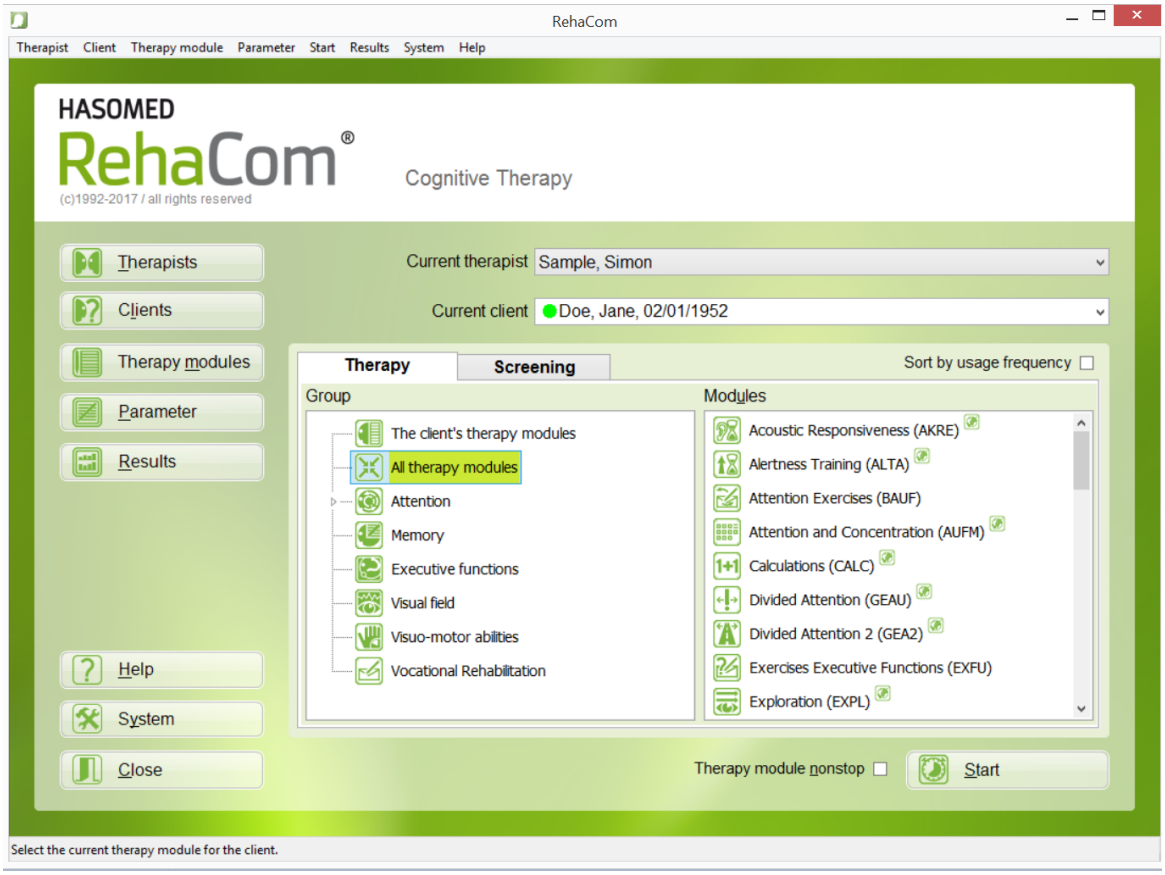
system. More specific information can be found in the following chapters.

2.2 Main window

Starting RehaCom, the ***main window*** appears.



Main w indow RehaCom.

This is the centre where from RehaCom is operated. There are different possibilities to use it.

One way to use the buttons is described in the Crash Course RehaCom. With the main buttons

- a client can be entered in the database or picked out for a session,
- a module or a training unit is defined or chosen for a client,
- training parameters are checked or changed before the start,
- the training is started, and finally
- the therapy results can be analysed.

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Furthermore the menu bar at the upper edge of the window can be opened via mouse click to see the following functions:

Therapist	Manage therapists
new	Add a new therapist
choose	Choose a therapist
edit	Editing therapist data
Client	Manage clients
new	Enter a new client
select	Select a client for training
edit	Edit client data
Therapy modules	Manage modules and training units
new	Define a new training unit
select	Select a module/ training unit
edit	Edit a training unit
Parameter	Change training parameters for the current module
Start	Start training
Results	See the results of training or screening
System	Check the system functions
Settings	System and network settings
User mode	Settings for the mode of operating
Licencing mode	Manage your licence mode
Panel/ Dongle	Check the RehaCom Keyboard or dongle
Licence	Licence administration
Backup/ Restore	Make a safety copy of the data
Start Service	Error analysis for the RehaCom-Service
Patient mode	The RehaCom system is switched to patients' mode
Help	Open help functions
Index	Opens this page
Send log files	Send log files for error analysis
Start remote control	Start TeamViewer Remote Control
Update RehaCom	Update RehaCom programme files
Info	Show version information

At the top of the main window, the user finds information about the **current therapist** (in case therapist data is used, see chapter Manage therapists) and the **current client**.

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At the center of the main window you will find two main tabs: **Therapy** and **Screening**.

When the **tab Therapy** is activated, a therapy module can be chosen in two steps:

1) In the left window **Group,** you can select the deficit of the client. A new choice here changes the list at the window Modules.
2) In the window **Modules,** all therapy modules belonging to the selected group are listed .

For the modules list, several text-colors are used. A module name is displayed in a light gray font, if the module is not installed. Available and licenced modules are listed in black.
When you don't want to show all modules to the client, you can change the appearance in the window settings.
In the module window the icon is placed behind different module names. This indicates that the module is available in the **language** of the current client.

By default, the list of modules is sorted by alphabet. The sort order can be changed to **sort by usage frequency** by the checkbox above the module list.
The sorting is done in three steps:

1) When a module has not been used by any client, the most recommended modules will show up at the top.
2) When a module has not been used by the current client, the most used modules by other clients will show up at the top.
3) When a module has been used by the current client, the most used module by the current client will show up at the top.

The checkbox **sort by usage frequency** can be found in several other windows too.

When the **tab Screening** is activated, a screening module can be chosen.

By right-clicking a module name, the manual of the chosen module can be shown.

The training of a module is started by a double-click or pressing the button **Start**.
The function of the checkbox "**Therapy module nonstop**" is explained at chapter Module nonstop.

System adjustments are made by pressing **System** button.

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3 Theoretical principles

3.1 Computer assisted rehabilitation

RehaCom is a system by the therapist for the therapist.

The training modules of the RehaCom system were developed to improve the performance of people with cognitive impairments (see Intended use). These impairments might be caused by different aethiopathogenesis.

RehaCom is not only a product but an overall concept based on 5 principles:

- modular structure of the modules starting with training of basic functions up to complex demands,
- optimal interaction therapist- client- computer as a fundamental element of the training.
- adaptation of training difficulty to the performance capacities of the client,
- effective feedback for highest possible motivation of the client and
- effective monitoring of therapy progress through integrated screening modules.

3.2 Modular structure

RehaCom has a modular structure. At the moment, modules are available to train the following cognitive skills:

- ***Attention, concentration and vigilance***
- ***Reaction time and precision***
- ***Memory and learning ability***
- ***Executive functions, problem solving and developing strategies***

Furthermore, there are modules for therapy of ***visual field deficits*** for clients e.g. with hemianopsia and neglect. Additionally, there are even more complex training units serving the compensation of deficits and the ***imparting of abilities and skills***. An important meta- aim is the integration of processing information of different sensory modalities via stimulating several channels.

RehaCom is in a process of constant development in which established modules are mirrored in the experiences of the clinical routine, and new modules are created according to the clinical requirements. Basically, the aim is an optimal individualization of the computer- assisted training. Highly realistic modules are gaining more importance. The proportion between modules with basic training functions and therapy modules for higher demands is of particular significance.

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3.3 Interaction therapist-client-computer

The relationship "therapist - client - computer" must be set up in a way that the relationship between therapist (psychologist/SLP/OT) and client remains the basic element. The therapist shall be relieved from routine work. The client must experience the computer as part of a therapeutically overall concept and feel that he is given full attention. The modules are structured in a way that allow the client to train on his/her own in general for a longer time, instructed and motivated by the computer. ***However, the computer can, should and must not ever substitute the therapist!***

Especially at the beginning of each session, the collaboration of therapist and client is desirable, in order to arrange today's training aim, estimate the current emotional and motivational state of the client and his/her performance capacities. This also applies to the end of each session - both should together evaluate and talk about occurring difficulties and problems.
To track the emotional state and development of the patient during therapy, the therapist may use the tool Self-evaluation.

The patient keyboard as central element of the RehaCom system is reduced to the minimum necessary:

- 4 extensive buttons,
- 3 special buttons,
- a joystick (optional) and
- number buttons.

Even motor impaired clients are enabled to move securely with the rugged, extensive reaction buttons. If desired, the feet can be used (additional device).

Some buttons of the patient keyboard are used similarly in all RehaCom modules. First of all there is the big green **OK**- button, generally used for confirmation or for moving to the next instruction. With the red **Minus**- button, the client can interrupt the training anytime. With the yellow **Plus**-Button, the training instructions can be restarted and thus reviewed. These buttons are located on both sides of the patient keyboard, on the left and right side of the cursor buttons, thus making it possible for the client to use them with both hands.The other 4 large direction buttons are mainly used as **cursor buttons** in a lot of training modules e.g. in order to move an element over the screen.

3.4 Adaptation to difficulty

RehaCom works adaptively and adjusts to the client's capabilities optimally. Mental over- or underload is avoided. Ideal preconditions for a maximum motivation for working with the system are created.

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The parameter menu provides additional options to individualise the training. Some modules offer specialised editors to integrate client-specific elements (e.g. pictures of relatives can be used in the module "Physiognomic memory").

The training can be interrupted or finished by the client or the therapist at any time.

3.5 Process measuring, and feedback

For measuring the performance, module specific process data is recorded. The level of difficulty is adapted and feedback is provided on the basis of the collected data. It is saved and serves to operate the intervention processes. The data may also be used for a diagnosis accompanying the training.

While working, the client receives information about his performance by simple graphics or acoustic feedback..

Furthermore when there is a change of the difficulty level, the client is verbally informed about the level on which to continue. Mostly an error analysis of the last task is included. These hints shall provide helpful critics to the client, such as the necessity for further practice, and information about aspects of the training the client should concentrate on.

After finishing a session, the performance history presented in a single graph is available to therapist and the client (see Analysis of process data). It is the basis for the final talk at the end of each session. On top of it, the therapist receives further details on the performance history. Therapy parameters, client data and process data can be exported to Excel for scientific investigations.

A report can be printed out as proof of treatment for the insurance company etc., containing and summing up the therapy.

To measure the improvement of performance of the client, the therapist may use the screening modules.
Screening modules should be used before the first therapy session, in order to retain the state at the beginning of therapy. After at least 10 therapy sessions the screening can by repeated, in order to show the development of performance.
For more information see chapter "Use of RehaCom screening modules".

3.6 Training strategies

The overall aim of cognitive rehabilitation is to reduce the impairment caused by the brain damage. When defining aims of training, the client should achieve as much independence as possible through as much of his own means as possible. The main criteria of success must be the client's subjective opinion about the change of his

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quality of life.

When selecting a therapy method, aspects of motivation, understanding of the disease, ability to abstract and anticipate sequences of actions (or the extent of their impairment) have to be considered. Precondition for an optimal individualisation of the treatment are a detailed neuropsychological diagnosis of the separate cognitive functions and a detailed planning of the overall treatment concept based on that diagnosis.
The main potential of ***computer- assisted neuropsychological therapy*** lies in the maximum individualisation and intensification of cognitive brain performance therapy.

Wilson (1989) differentiates between 3 rehabilitation theories:

- ***restitution of functions***
- ***compensation of functions and***
- ***substitution through intact functions.***

Resource orientated therapy approaches (Matthes, v. Cramon & v.Cramon, 1995) emphasise those components or remaining skills of the client which can be used in order to reduce the impairment. This aim is followed up with these treatment approaches:

- ***procedures of exercises,***
- ***imparting internal strategies,***
- ***supporting meta-cognition and***
- ***using external help.***

Basically the therapy should orientate to the specific disturbance. The more exactly the disturbance is described in terms of behavior, the more individual a training plan can be set up, and the higher is the validity of the indicators of the training performance.

Computer-assisted training of functions mainly consists of repetitive exercise and needs the therapist to impart strategies linking to daily routine. Future RehaCom modules will support the therapist in this strategy finding. Aside from activating and training existing knowledge and abilities, new skills are learned.

Through developing ecologically valid computer- aided modules, a transfer of the acquired skills and strategies to daily routine is possible. Meta-cognition, i.e. the individual knowledge about personal cognitive processes and the strategies necessary to perform tasks, is specifically supported. This and the adaptation to spontaneous strategies of the client contribute to an individualisation of the training.

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3.7 Use of RehaCom screening modules

RehaCom offers screening modules that can be used to assess and document the client's performance level before starting cognitive training. The results of these modules enable a rough assessment and assist in selecting suitable RehaCom therapy modules. The performance can optionally be compared with reference values from healthy individuals to further support the assessment. The final selection and evaluation is always the responsibility of the treating professional.

The results of the RehaCom screening modules should always be viewed in their overall context. The results provided are intended for progress monitoring and should be supplemented and classified with additional information. Relevant sources of additional information include:

- Behavioural observations during the test (e.g. motivation, handling of errors)
- Self-assessment by the client regarding performance, stress or mood
- Third-party information provided by relatives or carers
- Reports from previous treatments or rehabilitation processes
- Results of other cognitive or psychometric procedures
- Observations from everyday life or the therapeutic setting
- Information on professional and social background

The interpretation of the results of the RehaCom screening modules and the selection of possible RehaCom training modules should be based on an overall assessment of all available information.

It is important to emphasise that the RehaCom screening modules cannot replace neuropsychological diagnostics. They are not designed to detect clinically relevant disorders in a differentiated manner or to support diagnostic decisions. Their strength lies rather in progress monitoring: after several training sessions – a minimum of ten sessions is recommended – a repeat screening can provide indications of possible changes in the trained performance compared to the initial situation. Too short intervals between screenings should be avoided, as this can lead to learning effects that impair the comparability of the results.

The screening modules should therefore be understood as a supporting tool for progress documentation within the RehaCom system.

Differentiated, valid and clinically sound diagnostics remain the preserve of appropriately qualified specialists – for example, using standardised procedures such as the ‘Test Battery for Attention Assessment (TAP)’ according to Fimm & Zimmermann (available from PSYTEST, Herzogenrath), as recommended by the Society for Neuropsychology (GNP).

List of available screening modules

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Alertness
Divided Attention
Logical Reasoning
Memory for Words
Response Control
Spatial Numbers Search
Visual Field
Visual Scanning
Campimetry
Working Memory

Please refer to manuals of screening modules to get detailed information.

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4 Manage therapists

4.1 Choose therapist

Therapist management is used to assign patients to a defined therapist. Therefore it is possible after a training to find out, which training was conducted by which therapist.

Therapist management is only available for user mode "as therapist".

In order to work HIPAA compliant, the login function for therapists should be enabled (window Settings).

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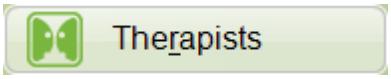
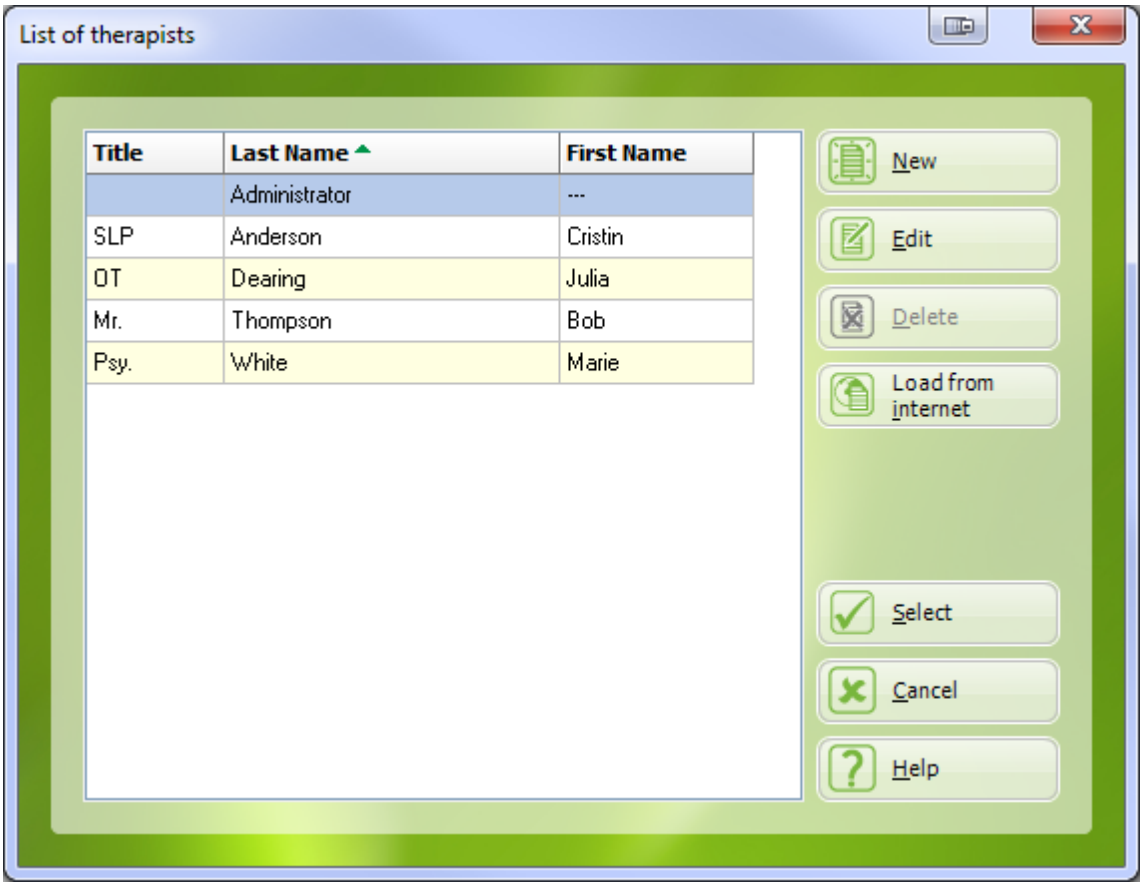
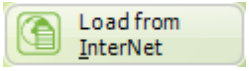
Pressing the button 

opens the window "**List of therapists**".

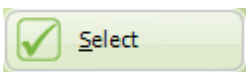


Window "List of therapists"

In this window you can add a new therapist, change **therapist data** (Edit) or delete a therapist.

The button 

will be visible for therapists working "with **internet-support**" (see User mode) or RehaCom-modules licenced by Internet (see Licence mode).
This button can be used to **import** a therapist, who is already registered on the Internet by another computer, to this PC.
When the window appears, type "**Username Internet**" and "**Password**" (see Edit therapist), and the stored therapist data will be loaded from the Internet.

By clicking the button 

the chosen therapist from the list will be

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selected as "**current therapist**".

The selection of "**current therapist**" can also be achieved at the main window. Please use the combo box "**Current therapist**".

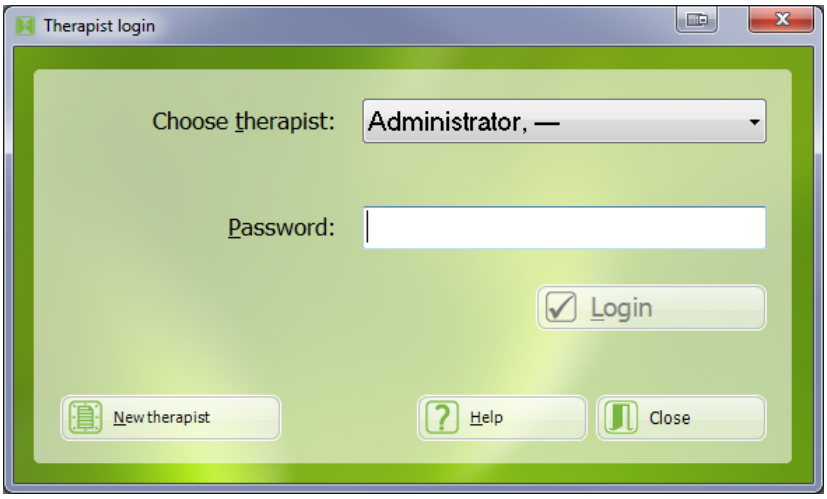
Each therapist can only treat his "own" clients. Clients of other therapists are not listed in the window Select a client. To enable another therapist to work with the same client, the client has to be assigned to this therapist at the window Edit client, tab "Therapists".

The therapist "Administrator" plays a central role. He has the rights to manage all clients. Never use the "Administrator" therapist for daily work!

4.1.1 Login therapist

By data security reasons, it is necessary to establish a close connection between therapist and client.
At client list, only clients of the currently chosen therapist are shown.

When the option "Therapist must login" is checked (menu Settings), at every RehaCom start and change of therapist a Login window appears.



Therapist login w indow

After input of password the therapist can see, screen, train, and evaluate "his/her own" clients.

When the therapist doesn't have a login, he/she can register by clicking the button "New therapist".

Forward patient

Each patient is assigned to one (or more) therapists. When a therapist wants another therapist to further process a patient, the menu "Edit client", tab "Therapists"

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has to be used.

Therapist "Administrator"

The therapist "Administrator" is predefined by the system. The Administrator has access to all patients' data, the option to change all patients' data and to distribute patients to all other therapists (menu "Edit client", tab "Therapists").
The standard-password for the Administrator is **RehaCom**. Because of the Administrator has access to all clients' data, it is recommended to change the password direct after RehaCom is installed (menu "Edit therapist").

Not all options are available in every country.

4.2 Enter therapist

This window is opened by clicking the buttons "New" or "Edit" in the List of therapists (or by the menu in the main window).

For internal use of therapist data within a clinic or a practice, the minimal inputs are "**Name**", "**First Name**" and "**Station / unit**".
To register a therapist on the Internet, additional data is necessary. All mandatory fields are marked green.
Working with the therapist-login, a password is required.

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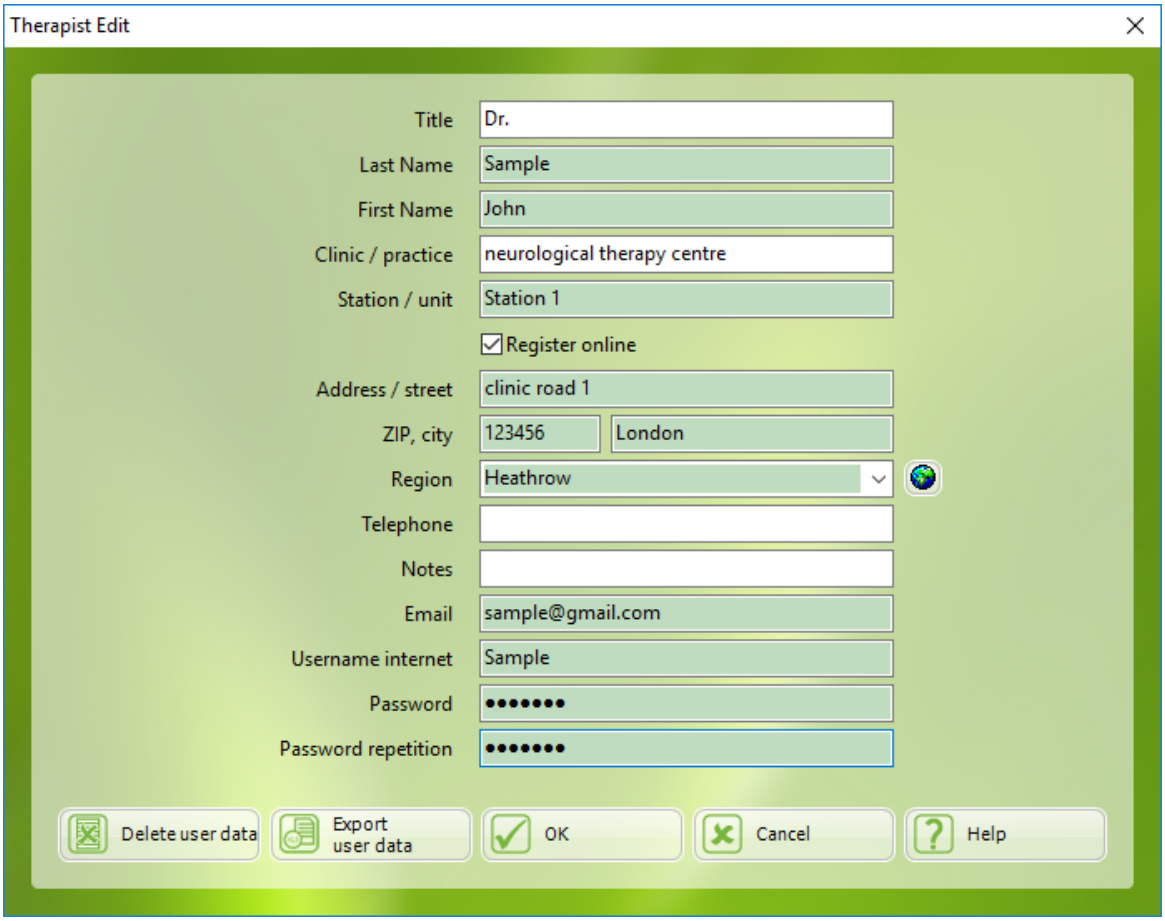

Window "Therapist new /edit"

If the field "register on the Internet" is checked, therapist data will be stored on the RehaCom web server after clicking "OK".
This is especially important when you are supervising the patient via Internet or if you want to use the "licensing via Internet" mode.

For every registered therapist, it is possible to export all personal data into an xlsx file format via the button "Export user data".

If the data is to be completely deleted, this can be done via the button "Delete user data". For therapist accounts registered on the web server, a request for deletion of all data will be sent to HASOMED.
Caution: This request will result in the PERMANENT deletion of all data concerning your person. This concerns personal user data, history and result data.
This process is irreversible and cannot be reversed. When this request is processed, your user data is deleted immediately and access to your RehaCom account is no longer possible. With the deletion of the user data any claim to user-linked license data also lapses.

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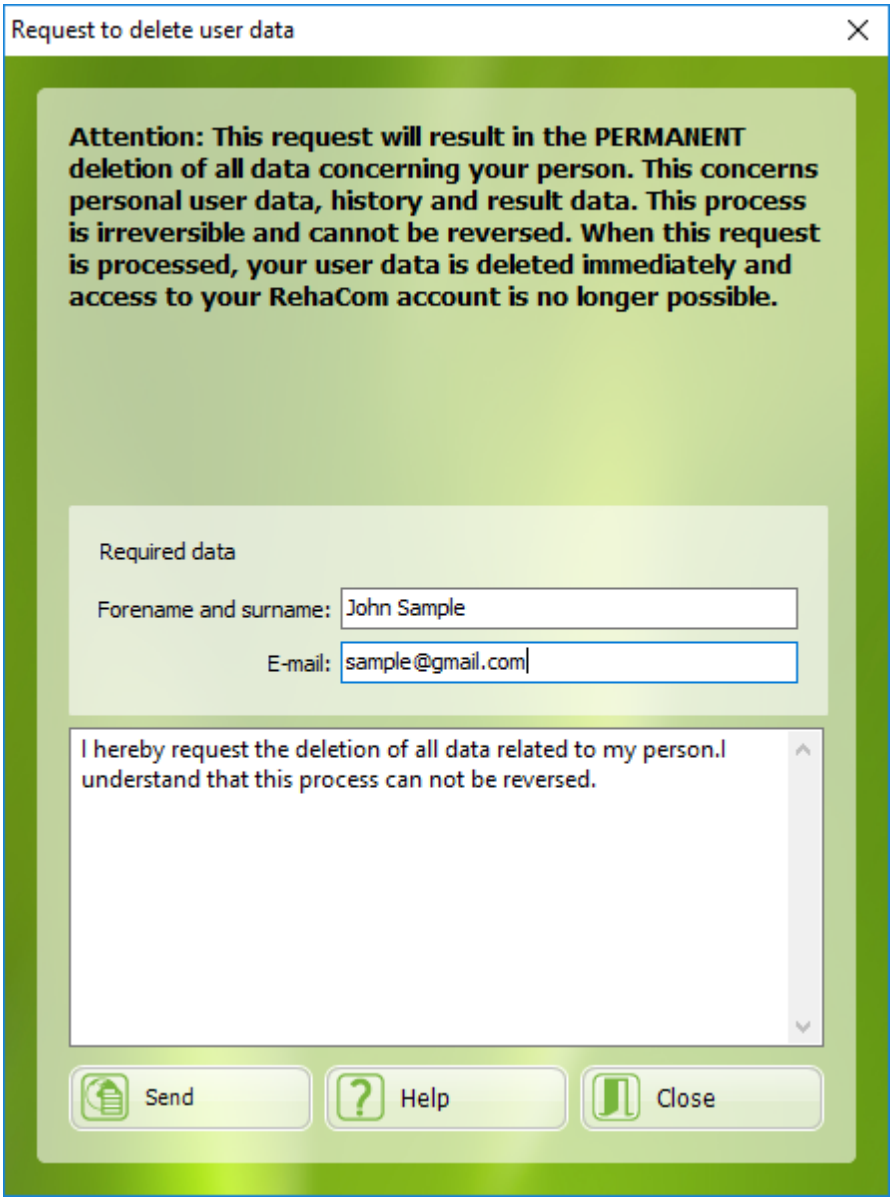

Form for the request to delete user data

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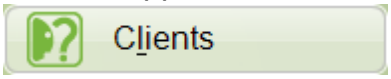
5 Manage clients

5.1 Select a client

Prior to starting the first training, the client's data has to be entered into the RehaCom database once (see chapter Enter client). The therapist may select a client for training or analysis of process data, from the the main window on 3 possible ways:

- pressing the little arrow-button at the field **Current client**. A list will show all clients of the therapist. Typing the initial letter of the patient's surname, the list "jumps" to the first client whose name starts with this letter.
- clicking **Client/ select** in the upper menu bar.
- pressing the button 

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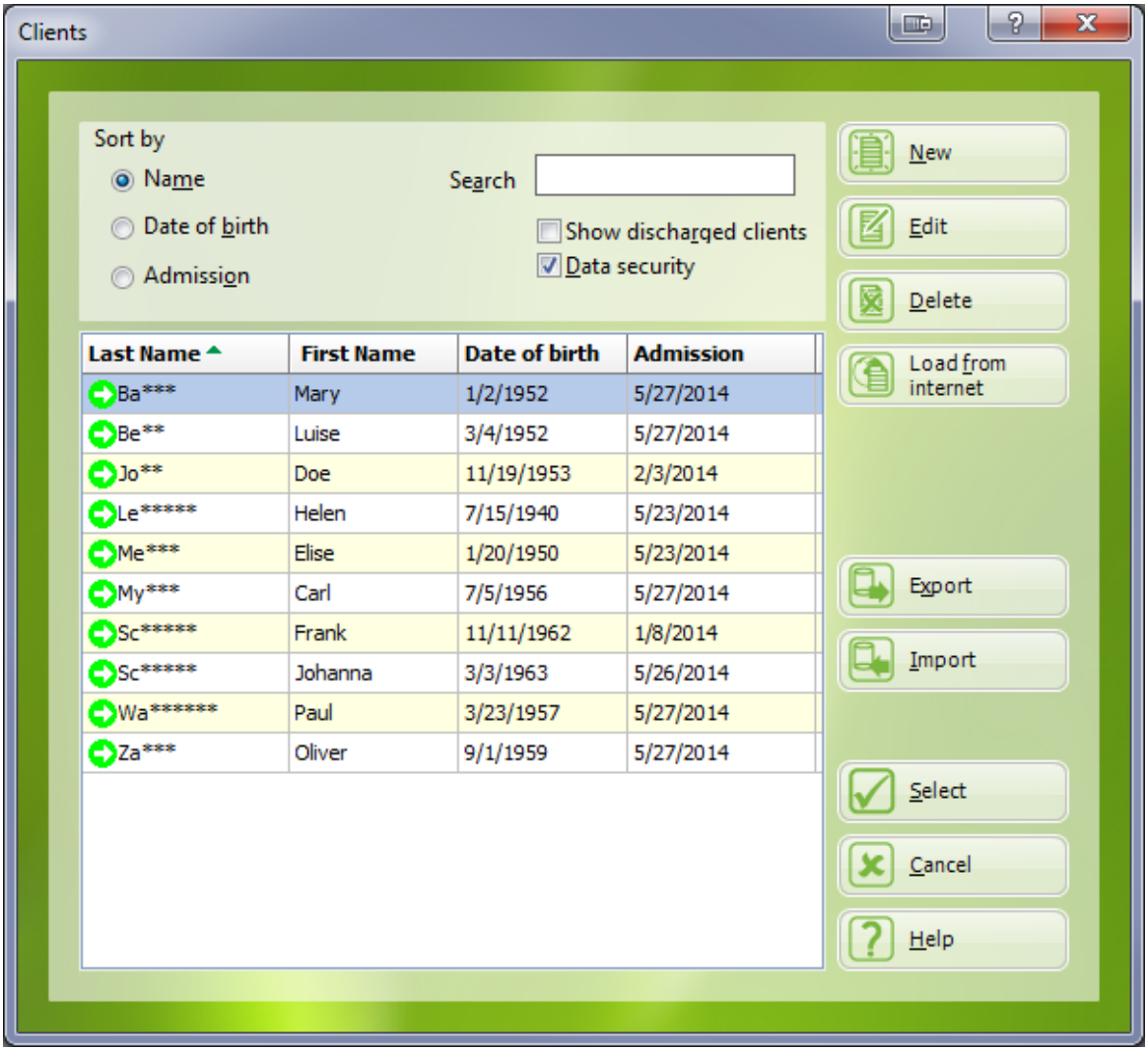
Using the upper menu bar or the button **Clients**, the window **Clients** will open.



Window Client

A list of all clients stored in the RehaCom data base is displayed.

To select a client for the next therapy or the analysis of process data, double-click on the client, or choose a name from the list and press the button **Select**.

The client list can be sorted by **Last Name**, **Date of birth** or date of **Admission**. A search function is implemented. Inserting a letter in the field **Search**, the list displays all clients whose surname starts with that letter.

If the option **Discharged clients** is switched off, only the currently treated clients are displayed in the list. If you switch it on, e.g. with the mouse, discharged clients will be marked ⛔ and current clients 🟢.

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With the option **Data security** switched on, the surnames of patients are shown with two letters only. Choosing a patient is possible without showing the list publicly. You can select a patient with his full name by using the "Search" field.

Using the button **New,** a new client can be added to the RehaCom database. The button **Edit** allows the change of client data in the data base. For further information about the client data saved in the data base see chapter Client data.

The button **Delete** removes a client, including all process data, from the data base. Generally client data should not be deleted. He rather should be deactivated and marked as discharged. Press Edit to open his Client data. Now select the tab **Payment** and insert a last day of therapy (=date of discharge). Thus the client and all his process data remain available in the data base. With the state of a **discharged client** he no longer will appear in the list of current clients. Discharged clients can be reactivated for further treatment.

Prescriptions / Internet:

The button **Load from Internet** is visible only with Licence mode set to "Licencing via Internet" or User mode set to "with external clients".
By clicking this button, you can load a client to the local system, provided the client has been registered at the web server from another computer. This may apply, when a client is shifted from a clinic to ambulant rehabilitation and RehaCom data is to be transferred via internet.

The button **Licences** is visible only with Licencing mode set to "Licencing via Internet" and the client registered on a RehaCom web server.
By clicking this button, you can order therapy licences over the internet.

Using the buttons **Export** and **Import,** you can save all RehaCom data of a client to a file (e.g. at USB flash drive), thus allowing you to transport client data from one PC to another PC without a network.

5.2 Enter client

Before starting the first therapy session, a minimum amount of client data has to be inserted and saved to the RehaCom data base, entered and operated from the window **Client data**. To reach the window Client data, go to

- menu list **Client/ New** or **Client/ Edit** or
- the window Clients (button **Clients** in the main window) and press **New** or **Edit**.

The window **client data** contains 6 tabs:

- Address
- Payment
- Therapy modules

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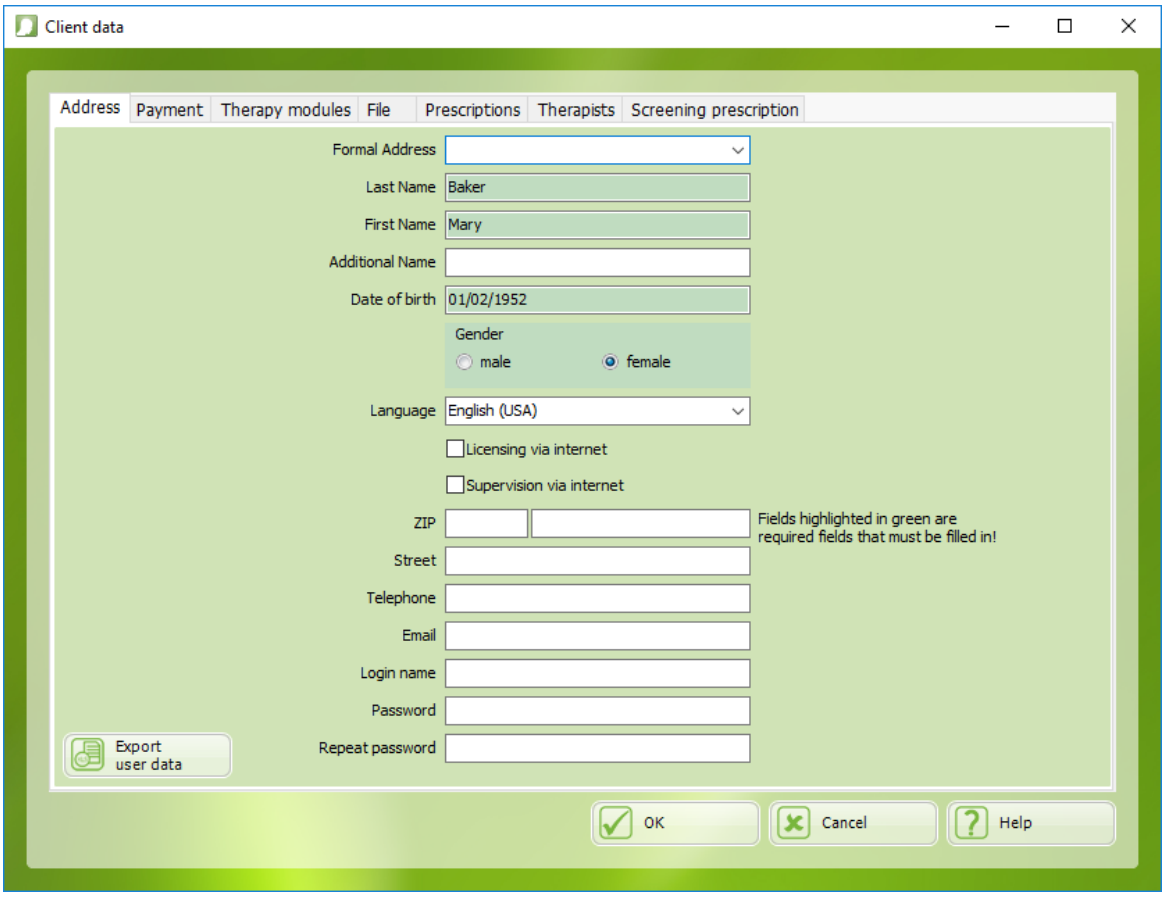
- File
- Prescriptions
- Therapists



window "Client data", tab "Address"

In the tab **Address,** the client's details are documented. **Last Name**, **First Name**, **Date of birth** and **Gender *must*** be entered. Further details are optional. The field **Language** is important for the training since the chosen language will be used to guide the client through the sessions, give instructions and feedback and make use of training material specific to a certain country.
When entering the date of birth, comply with the correct ***format of the date***.

You have to fill in the fields **Login-name** and **Password** if you want to use RehaCom in patient mode.
If you want to transfer data to RehaCom web server, additional fields (all marked green) have to be filled in (see Therapy prescriptions / teletherapy).

For every registered client, it is possible to export all personal data into an xlsx file format via the button "Export user data".

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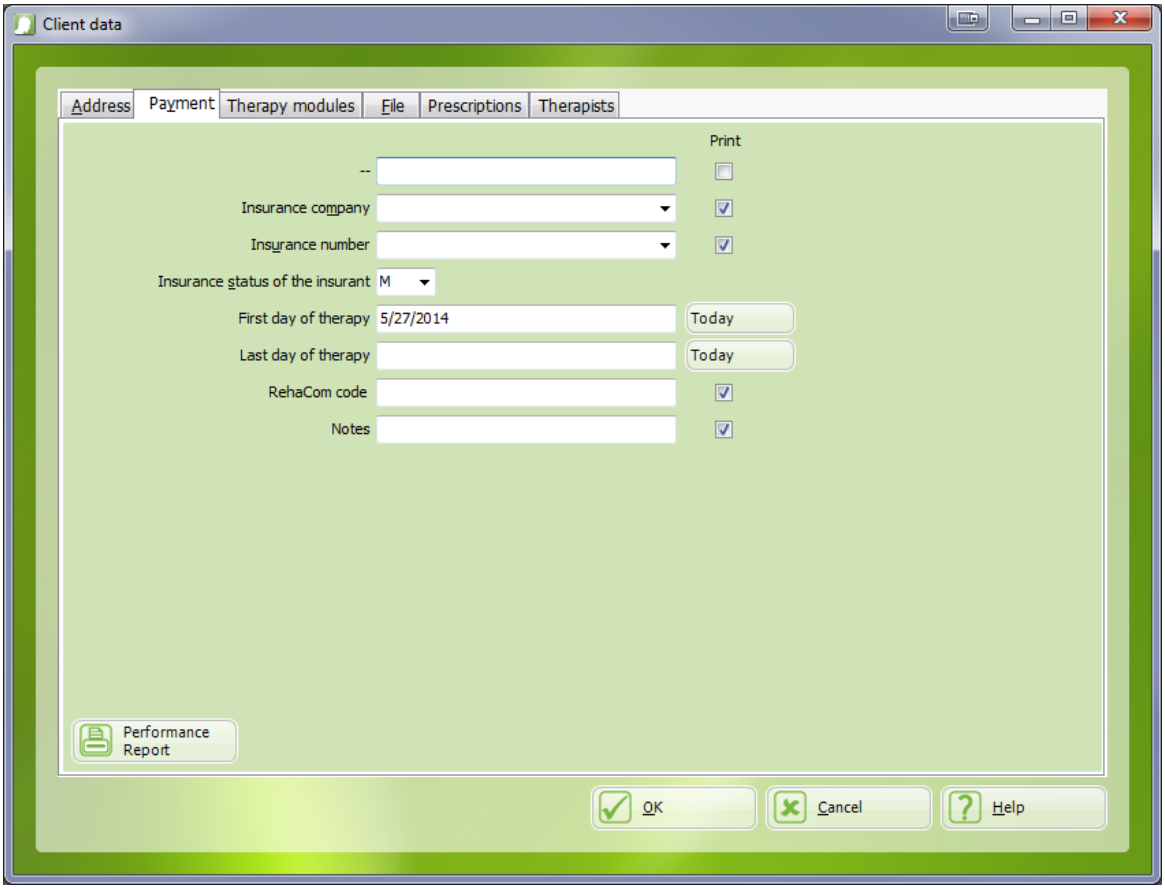

window "Client data", tab "Payment"

The use of the tab **Payment is** optional. The details about Insurance company and Insurance number will be displayed in a Performance Report which can serve as a proof of treatment for the insurance company. The **First day of therapy** is set automatically as soon as the client's data is inserted. The **Last day of therapy** can be entered freely or can be set by using the button **Today**. Once this last day of therapy has passed, the client no longer appears in the window **Clients**, but can be reactivated in case of a renewed treatment (see chapter Select Client). This deactivating is preferable to deleting the client data. The **RehaCom code** may serve as selection criteria in scientific studies after exporting the data.
Ticking the boxes below **Print** it can be decided which data will appear in the **Report**.

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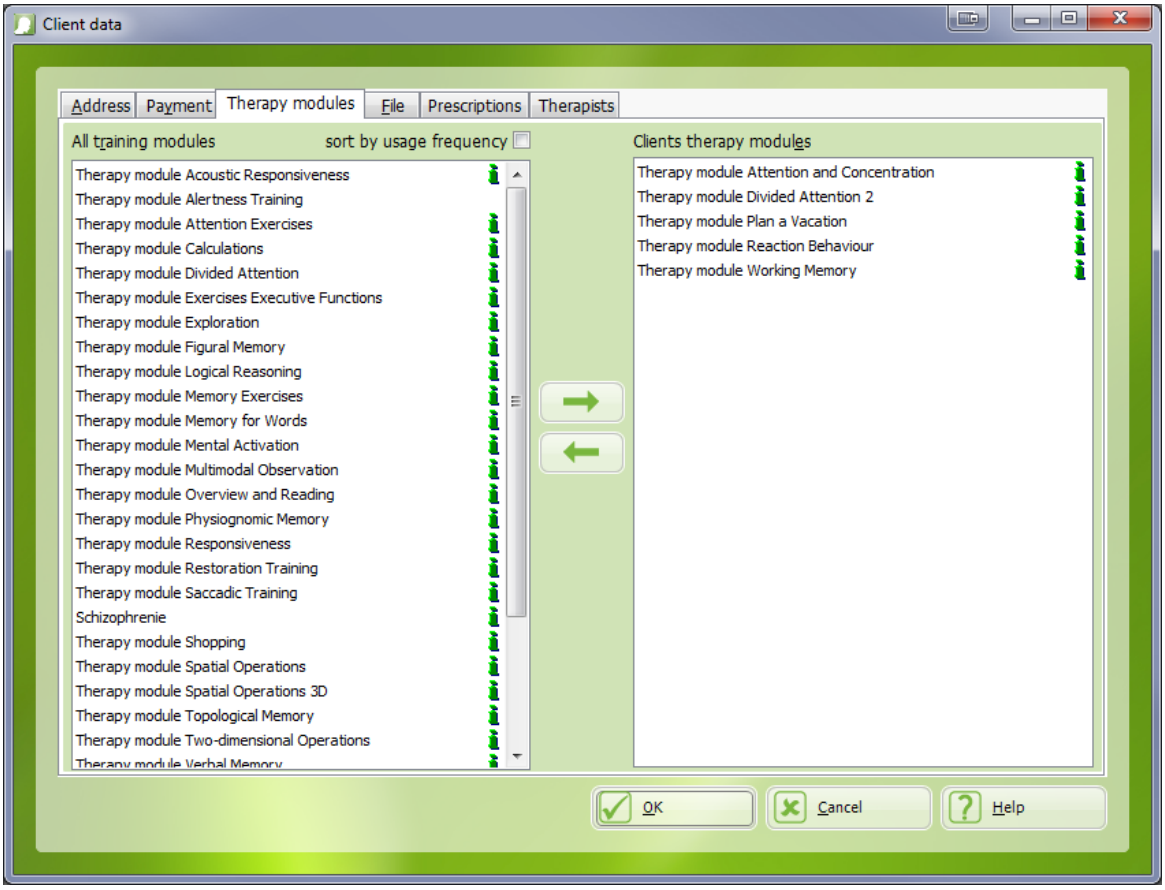

window "Client data", tab "Therapy modules"

The tab **therapy modules** associates a client with a (or a number of) module(s) (see also chapter Edit training units). The list shows all standard modules as well as therapy modules (batteries) defined by the therapist. The right hand side list contains all modules the client is going to train with. Entering or deleting of modules is done either by double-click, by marking the module and pressing the small arrows in the middle or by "drag and drop".
At mode "extended patients mode" (see tab "Prescriptions"), clients therapy modules are used in patient mode.

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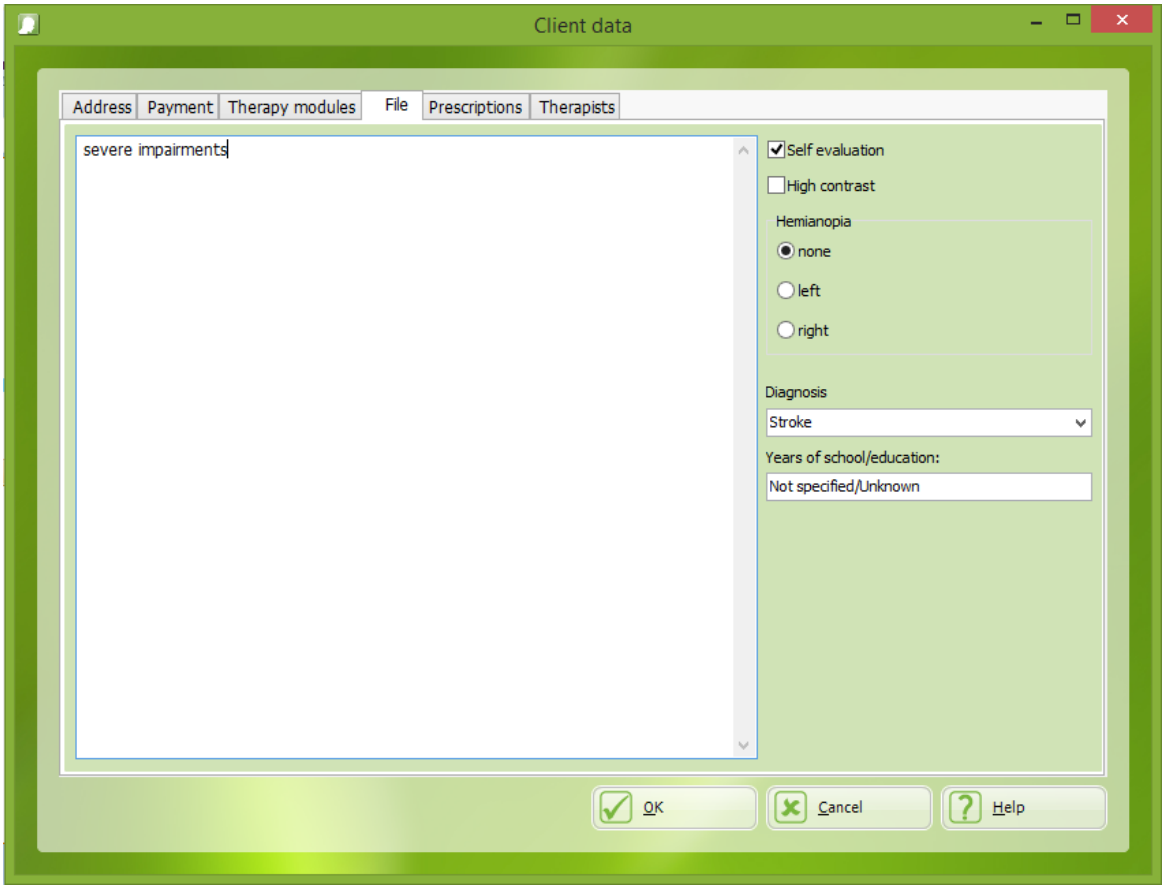

window "Client data", tab "File"

Self-evaluation

By means of this option, it is possible to ask the patient before and after every training about his **condition**. The patient assesses his current emotional state and performance.
During evaluation can then be determined how the subjective feeling has developed. Thus, both short term and long term changes in the patient's condition are documented.

High contrast

This option is advisable for patients with **visual disturbances, visual field disturbances** and **neglects**. In many RehaCom therapy modules assignments will then be displayed more clearly.

Hemianopia

This option can be checked if a patient with visual field deficits or neglect uses RehaCom. Important items are placed on the screen on the side without neglect.

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Diagnosis

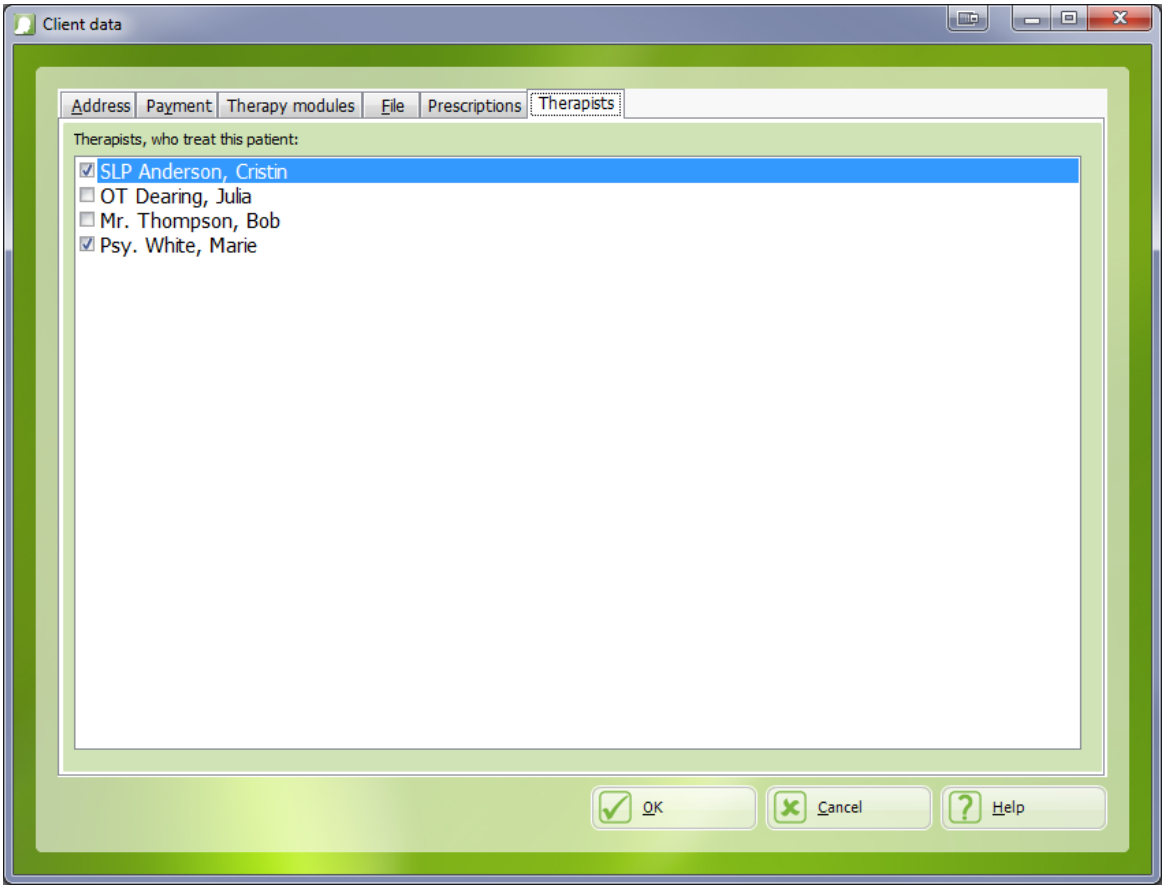
Several diagnoses can be chosen. When you are about to collect normative data for RehaCom screenings, please select "Test Person".

Years of school/education

Enter the years of education of the current client.

The fields Diagnosis and Years of school are only used in case of clinical trials. Data can be found in Excel export.

The tabsheet **Prescriptions** is used to define **therapy prescriptions** for the client. Detailed information on prescriptions you will find in the corresponding chapter.



w indow "Client data", tab "Therapists"

Each client is treated by one or more therapists. Only those therapists checked at the list above, are able to perform therapy with this patient and to evaluate result data (see Login therapist).

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5.3 Report

The report briefly documents the client's treatment data. It can serve as a proof of treatment for the payers taking over the treatment costs.
In the window "Client data" and "Result evaluation" the report can be saved as PDF file or printed out.

At the top of the report the insurance company and the client's details appear, according the checkboxes marked for printing in the window **Client data** (see chapter New/ Edit client)

Then a table follows containing the columns

- RehaCom modules used for treatment
- date of the first session
- date of the last session
- number of sessions
- training time total and
- the last level of difficulty achieved in relation to the highest level possible.

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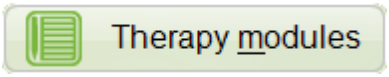
6 Manage training modules

6.1 Select a module

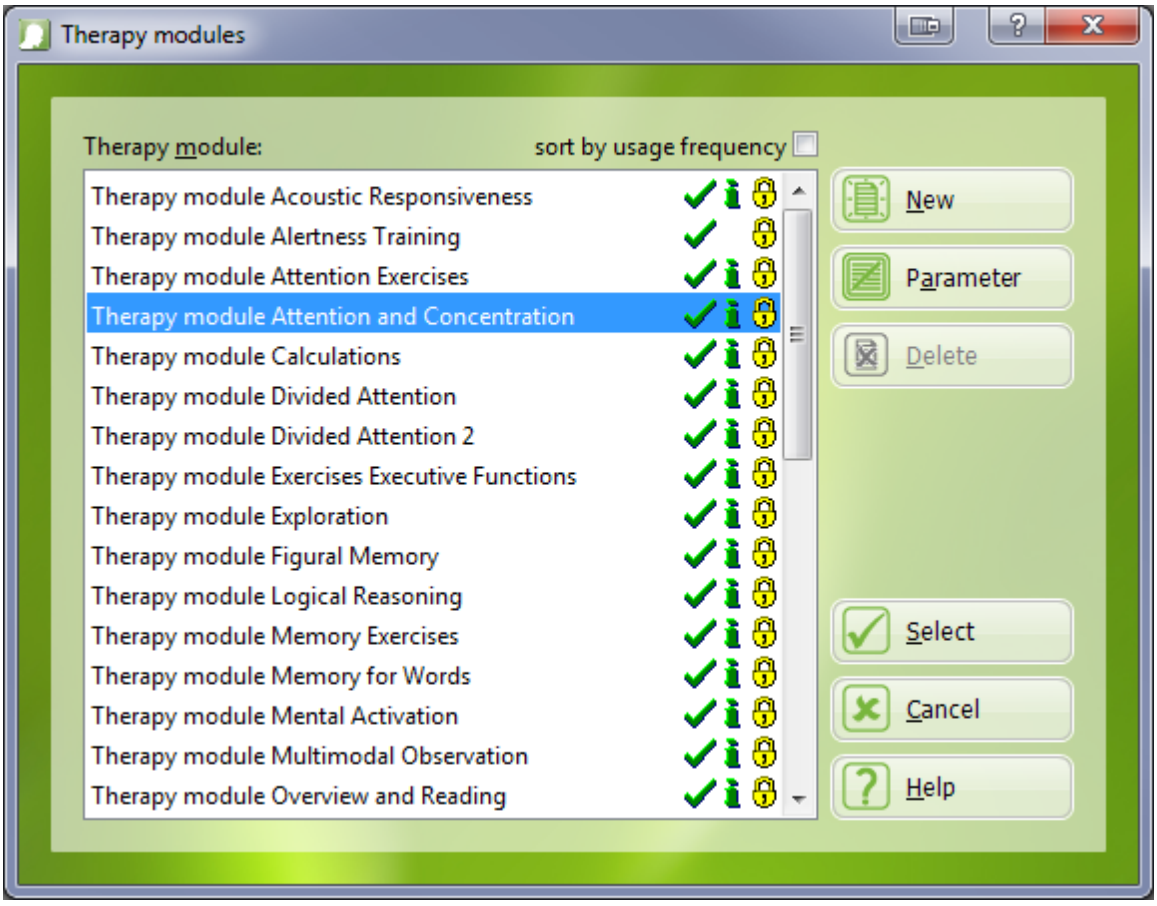
Once a client's data is entered, a module or battery is selected.

With the button



or the menu bar **Therapy module** / **Select...**, the window **Therapy modules** opens up.

With a double-click on a module in the list, or marking and pressing **Select**, a module for the next training is picked out.
The chosen module is immediately added to an internal list containing all the modules planned for a particular client.



Window "Therapy modules"

The internal list can also be checked or modified via the window **Client data** in the

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tab Therapy modules (see chapter New/ Edit client).

In the list certain modules are marked with . These are the RehaCom standard modules. They cannot be modified or deleted.

When you have selected a module marked with you can use the buttons **New** and **Parameters**.

When you have selected a module marked without you can use buttons **New**, **Edit** and **Delete**.

Buttons New/Edit

A new module or module combination (battery) is created or can be edited (see chapter "Edit training units").

Button Delete

Delete a self created module or battery.

Button Parameter

The button **Parameter** in the window modules changes the RehaCom default parameter setup for **all future clients**.
When you change parameters of a module, these parameters are applied for all clients who have never used this module before.
In order to change parameters of one specific client, please use the Parameter button at main window or Therapists menu.

6.2 Edit training units (batteries)

After installing RehaCom on your PC, all standard modules, when they are licenced, are available for training. The training parameters are pre-generated, so after selecting a module a client can instantly start practising.

Furthermore RehaCom offers the therapist to define new ***training units*** for a particular disturbance (e.g. in memory skills) or a certain group of clients. A training unit can consist of one or a range of module(s) and include special training parameters, ***created by the therapist***. Training units can be named freely. It is recommended, however, to use the term ***Module*** for training units consisting of ***one*** standard module only, and the term ***Battery*** for units consisting of ***more than one*** standard module. Both terms should precede the unit's name. There might e.g. be a training unit called "***Module*** long term attention" consisting of the standard module Vigilance with the Parameters especially adapted, or a "***Battery*** Memory 1" combining three standard memory modules.

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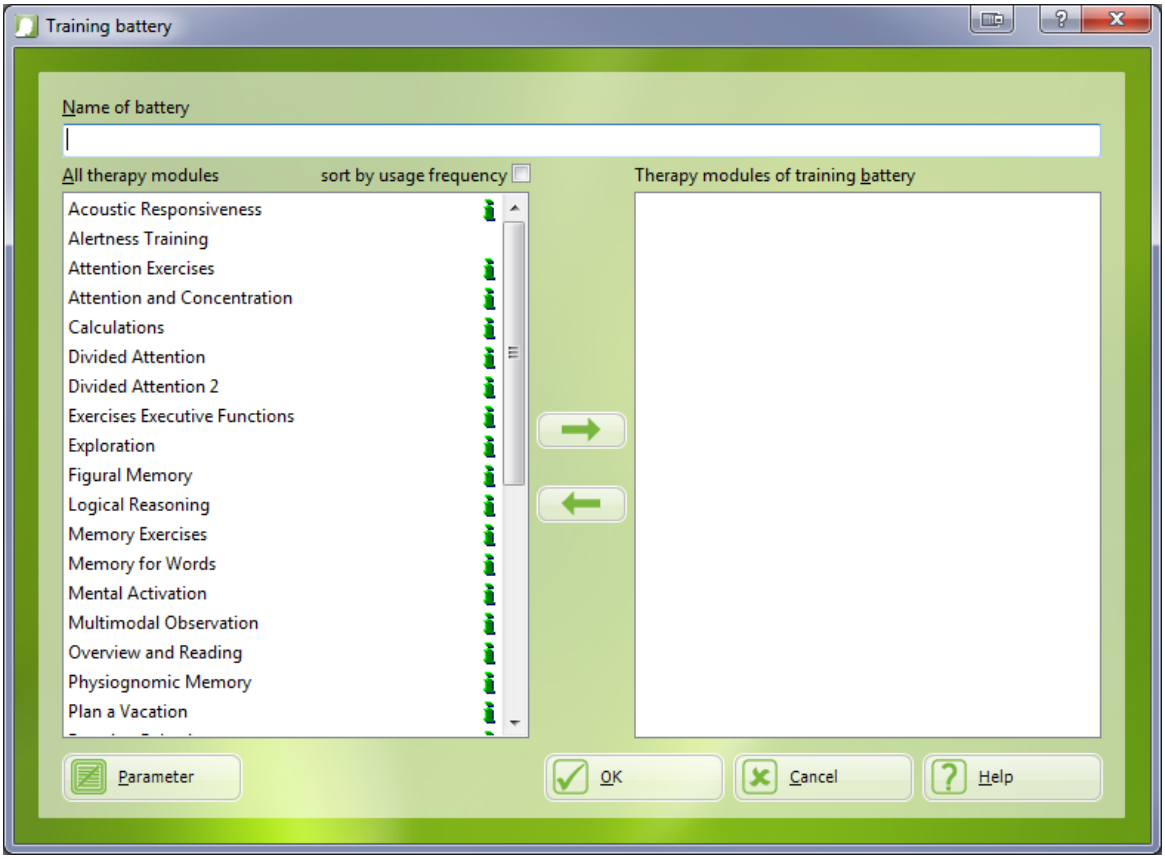
How to create a new training unit is explained now by way of an example "Battery for clients with disturbances in memory" called "Battery Memory 1". Clients of this module shall train the standard modules Memory for words, Verbal memory and Figural memory, one after another and 15 minutes each.

First click the button **Therapy modules** in the main window. Press **New**, and the window **training battery** appears. Alternatively **Modules**/ **New** in the menu list can be pressed.

Now enter a name in the field **Name of battery**. Only one unit may be called by that name. If you made a mistake you will be told so.

The left hand side list contains **all modules** available in RehaCom by default. By means of the arrow buttons in the middle, double-click or "drag and drop" the modules Memory for words, Verbal memory and Figural memory are moved to the right hand side list. The list **Therapy modules of training battery** now shows the modules the new training unit consists of. The order of the modules in the training unit can be changed via "drag and drop".



Window "Training unity"

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In order to adjust training parameters, press the button

.

Each module's parameter windows opens up. The training parameters are now adapted to the special requirements of the "Battery Memory 1", e.g. the length of session is generated as 15 min for all modules.

In order to ***modify an existing battery***, go to the window Therapy Modules, mark the desired battery and click **Edit**. Go on as described above. Only newly created training units can be modified, whereas the RehaCom standard modules, marked with , cannot be modified.

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7 Training parameters

7.1 Parameters

RehaCom modules generally work adaptively, i.e. the difficulty of the training automatically adapts to the client's performance. Mental over- or underload is avoided and the client is optimally motivated for the training with RehaCom. From 1990 on RehaCom has been used in rehabilitation clinics and institutes. Since, many experiences were collected and a range of studies carried out. Resulting from these investigations, parameter ***standard settings*** for each single module were worked out which can be used for the "general" client. Still it might be necessary to adjust RehaCom even further to a client or a group of clients.

For further adaptation see the windows **Training parameters**. Every module has specific training parameters as described in the help files of each module. There you are also told about the implications of changing the parameters on the therapy.

There are 3 ways to modify training parameters:

- for a therapy module: window **Therapy modules** (see chapter Edit training units)
- for a client: in the main window, press the button **Parameter *before the training starts*** and
- for a client in the therapist menu ***during the training*** (see chapter Crash Course RehaCom).

When using and adapting the training parameters, some things should be taken into account.

If a client trains with a ***standard module***, marked with , or a training unit using a standard module, automatically the ***standard settings*** of the parameters are generated.

If the parameters of a training unit are modified, these modifications will be used as ***standard*** for the therapy module. If a client uses the therapy module, the changed module's standard will be generated, not the standard of the original module!

If a standard module or a training unit is associated with a client, the parameters can be adapted specifically to the *client* without consequences for the original module. However, if a module's parameters are modified, the changes will not apply to modules associated with a client ***earlier***, the training parameters of the client will stay untouched. That way the training parameters of a client are not coupled with possible basic changes.

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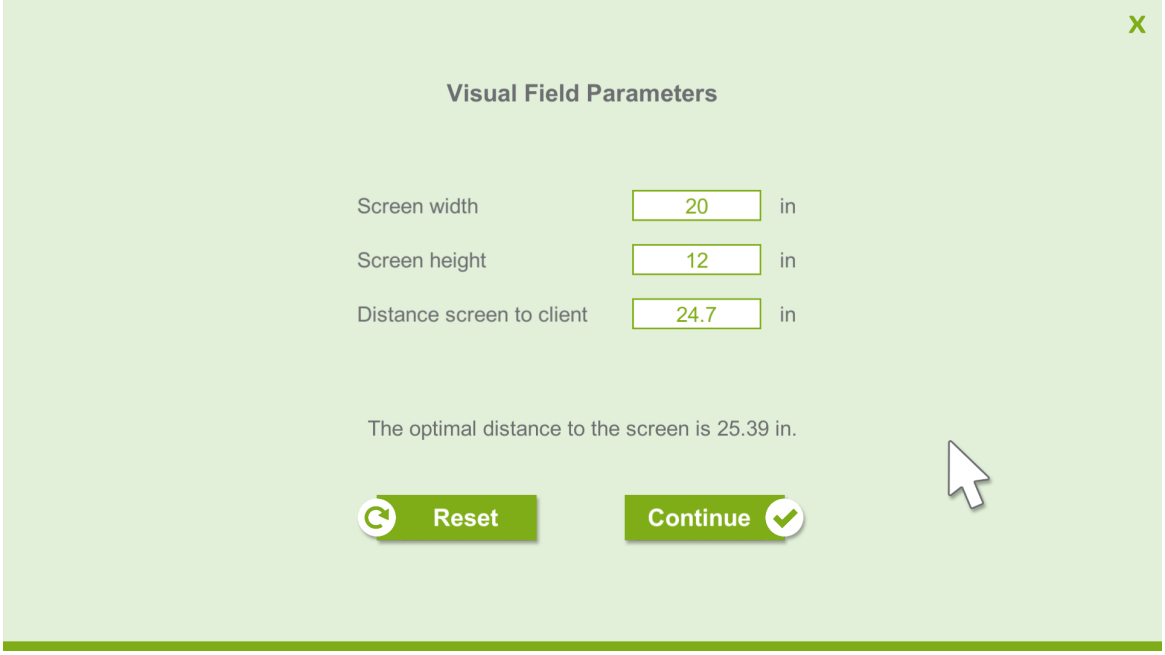
7.2 Screen parameters



For an effective training of visual field modules it's important to know the precise dimensions of the used monitor. For that reason a parameter menu appears before the training starts. The width and height of the used display as well as the client's distance to it have to be inserted to the designated input fields. The optimal distance between client and monitor gets calculated by the screen's dimensions and is displayed as recommendation.
When the parameter menu appears for the first time all values are approximated, indicated by an "*" next to it. Those values have to be checked for correctness.

All values will be saved and restored as default values for future training sessions. By hitting the Reset button all currently made changes get discarded.

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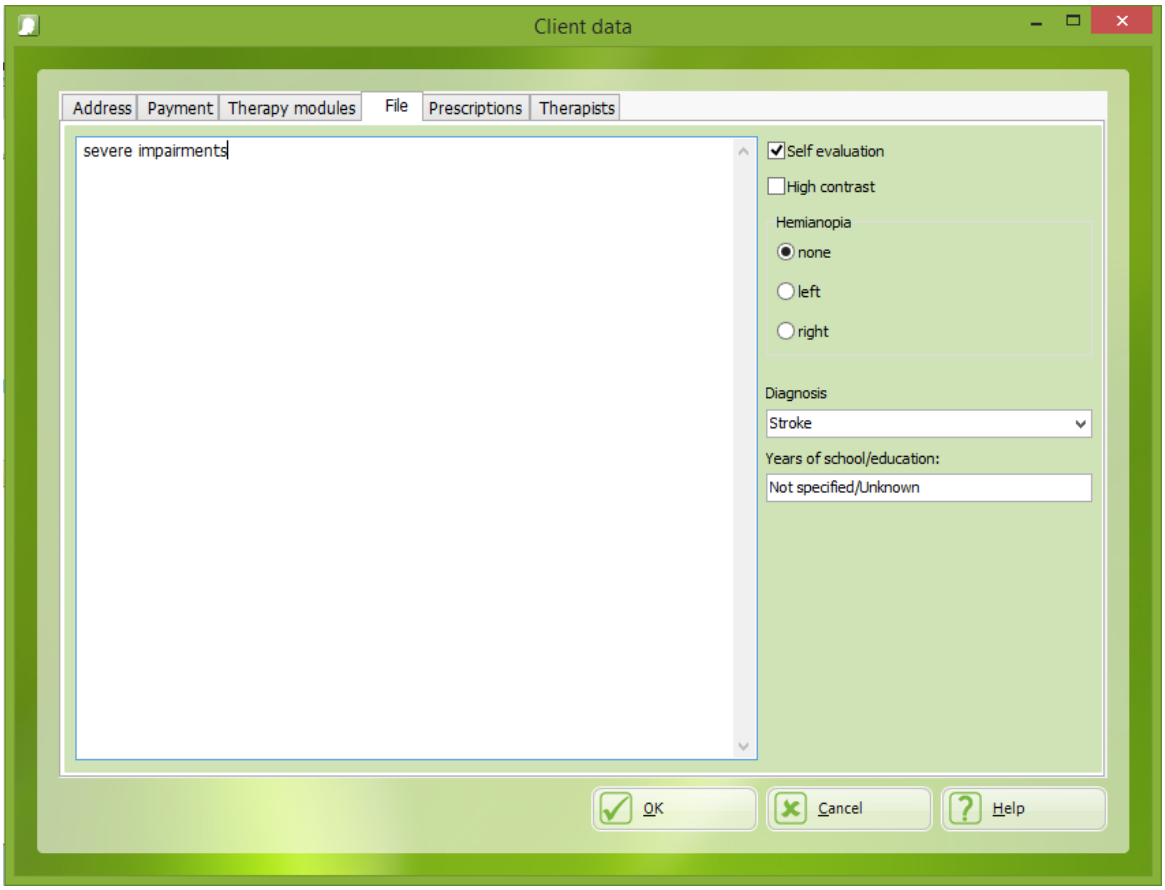
8 Training

8.1 Self-evaluation

By means of RehaCom, the patient can evaluate his own performance before and after each training.
Self-evaluation can be switched on or off in the window **Client data**, tab **File**.



Window s "Client data", tab "File"

The questions for the patients are predefined at file GLOBALEN.TXT (directory C:\Program Files (x86)\RehaCom6)
Please search TXT file for keys:
@SelfEvaluationQuestion1, @SelfEvaluationQuestion2,
@SelfEvaluationQuestionAfterTraining1 and
@SelfEvaluationQuestionAfterTraining2.

Before the training starts, the following form is shown:

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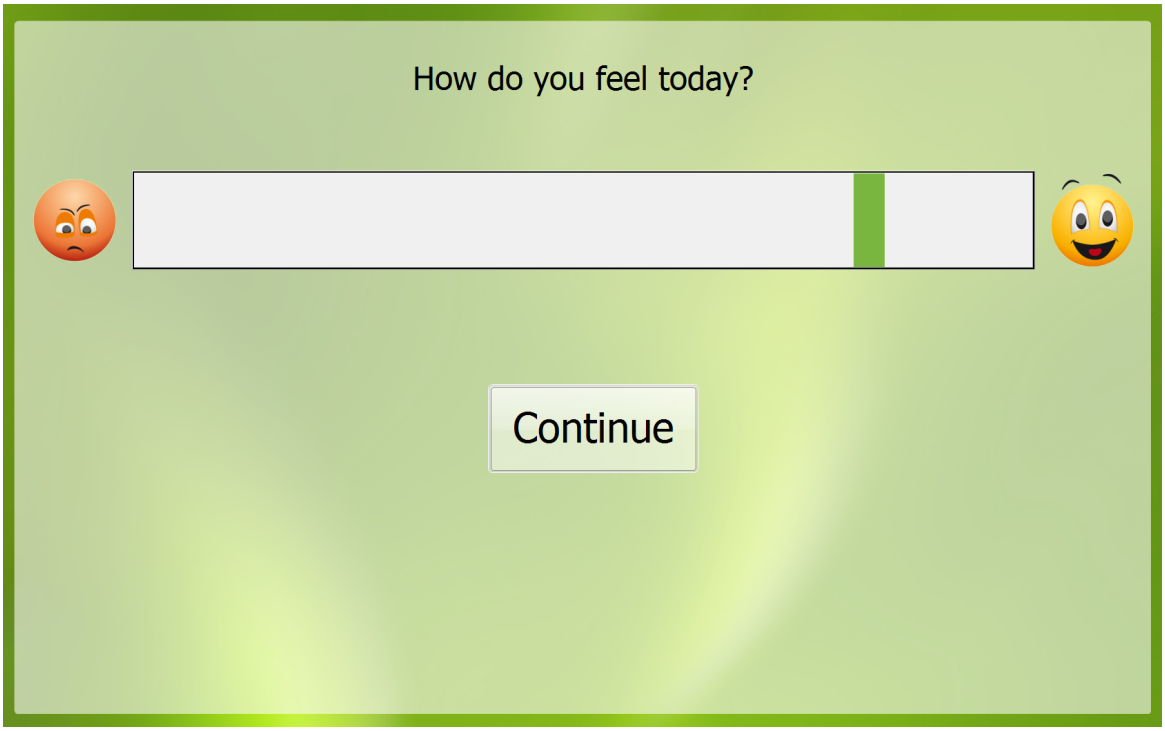

Self evaluation form before the therapy session

The patient can tell his mood by clicking anywhere in the white bar.
The form is shown for the 2 questions before the session
(@SelfEvaluationQuestion1, @SelfEvaluationQuestion2)
and again for the 2 questions after the session
(SelfEvaluationQuestionAfterTraining1, SelfEvaluationQuestionAfterTraining2).

The therapist can analyse the results of self-evaluation in the window Result evaluation, tab "Self-evaluation".
Two graphics are shown, one for question 1 and one for question 2.
The values of self evaluation range from 1 and 10.
Values before training are shown in red, values after training are shown in blue.

8.2 Workplace RehaCom

While setting up the workplace for RehaCom, the following principles must be considered:

The RehaCom keyboard is to be positioned in front of the monitor screen. It is recommended to use at least 19" monitors with a screen aspect ratio of 16:9. A broad arm support area in front of the RehaCom keyboard is also needed. The computer keyboard, which is usually used by the therapist, is to be positioned sideways in a way that the therapist can still see the monitor comfortably. The distance between the patient's face and the monitor should be 60-70 cm. A table's height of 70 cm and the use of a height-adjustable cushioned chair with a backrest

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and armrest is recommended.

The place of training should be illuminated in a workplace-friendly way. Glare or reflections on the monitor screen are to be avoided. The training environment should be low-noise. It is also recommended to use headphones when using audio output or acoustic feedback with multiple clients in the room in order to avoid any interferences.

Therapy prescriptions / Internet:

If RehaCom modules are to be licensed via Internet or if a supervised training session is to be carried out via Internet a workplace with an Internet connection is needed. The Internet connection can be established via modem, ISDN, DSL or a local network.

The data transfer has been optimized in such a way that only the absolute necessary amount of data will be transferred. The amount of transferred data is so small, that a supervised training session can also be carried out with a low bandwidth (normal connection via modem).
If data has to be transferred, RehaCom automatically opens the standard connection. After one minute without data transfer, RehaCom automatically closes the connection. All data will be transferred via the HTTPS-port, so that data transfer is possible even through a firewall.

8.3 Module nonstop

In the chapter Crash course RehaCom you find all necessary steps before the training and the course of a training itself.

A training is started by clicking Start button

in the main window. Next to the button **Start** you see a checkbox **Therapy module nonStop** which modifies the course of a training.

If this button is switched off ☐, the therapist menu opens up after pressing **Start**. Now the training parameters can be modified, and the training commences via **Continue** or **Start with** or **without instruction**.
When training with several modules (a battery), after every module the training is interrupted and the client's graph of performance is displayed followed by the therapist menu. The next module is restarted by the therapist. So if the checkbox **Module nonStop** is without tick, the therapist can check and interfere constantly as it might be necessary during the first sessions.

If the button is switched on (☑), the training commences immediately. After finishing one training, the graph of performance is NOT displayed. In a training unit consisting

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of several modules, the training continues with the next module. The client "works continuously". Once all the modules of the training unit are finished, the graphs of performance come up. This option is recommended if a client can work with RehaCom independently.

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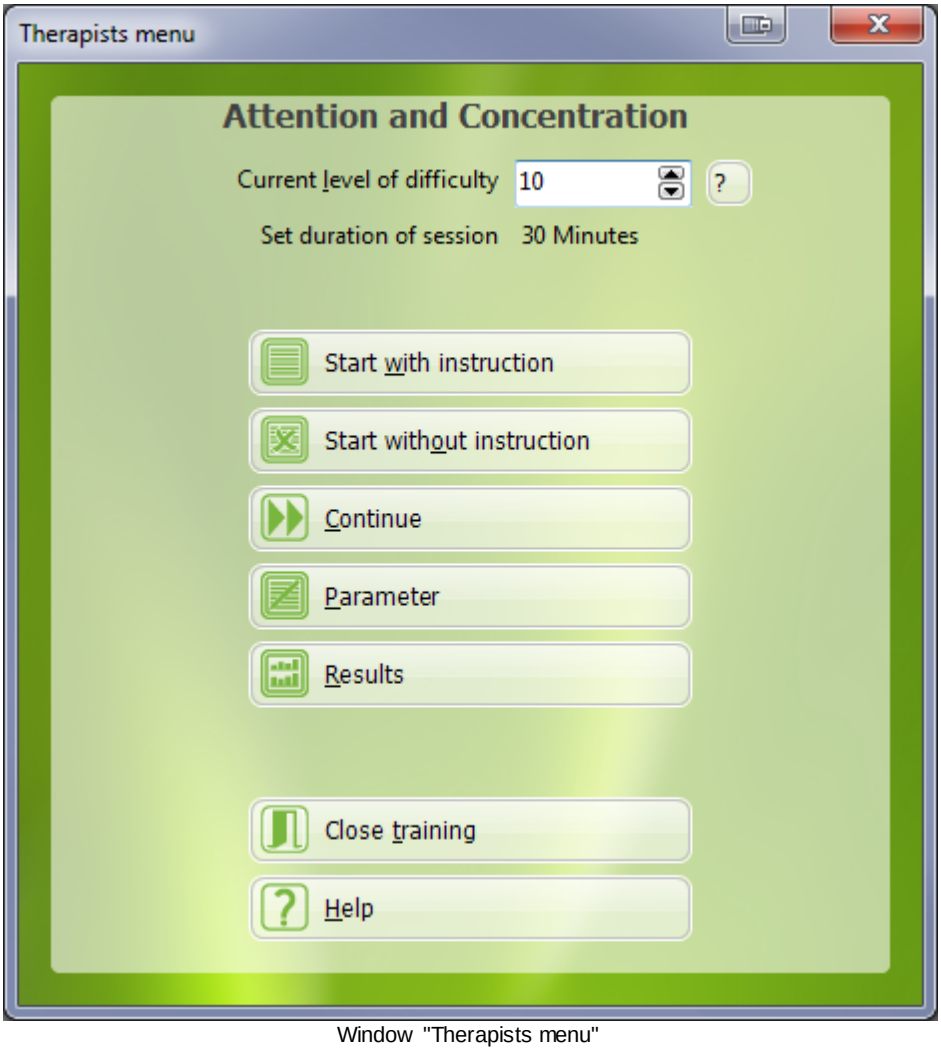
8.4 Therapists menu

In order to interrupt the training, there are 2 possibilities:

- the client presses the red **"-"- button** on the RehaCom Keyboard. He can have a break then, continue training or call up further instructions about the training task.
- the therapist presses **Esc (Escape)** on the PC keyboard. ***Doing that, all the process data of the started task are lost***. The therapist menu will open up.



Window "Therapists menu"

In the upper part of the therapists menu you can modify the **Current level of difficulty**. The number of levels of difficulty varies from module to module. To get a list of available levels click on the button with the question mark ? .

Below the difficulty setup the therapist finds information about the duration of session. The duration of session can be modified by clicking Parameter.

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A new session is started by clicking on **Start with(out) instruction**. With instructions a introducing text is shown. Some modules offer exercises to get familiar with the training.
"Without instruction" can be used for patients already familiar with the training task or not able to read or understand instructions. In this case, the therapist has to support the patient during the learning phase.

When you start a new session, the process data acquired during a running session will be lost. When you want to keep data of a running session e.g. after change of some parameters, use the **Continue** button.

Pressing **Parameter**, parameters of the current module can be modified (see chapter Parameters). Thus the training can be adjusted to the client's special requirements. Each module manual will provide comprehensive information.

With the button **Results,** the therapist can analyse the process data. The therapist can realise and react towards the client's performance deficits and capacities during the training already (see chapter Analysis of process data).

Finally the **Close**- button aborts the training. Using a battery consisting of several modules, a single module can be interrupted with the button **Close module**, visible in this case only.

8.5 Modules

List of therapy modules available in RehaCom:

Attention and concentration
Divided attention
Vigilance
Topological memory
Physiognomic memory
Shopping
Memory for words
Acoustic reactivity
Figural memory
Verbal memory
Reaction behaviour
Visuo- constructive abilities
Plan a vacation
Visuo- motor coordination
Two-dimensional operations
Spatial operations
Logical reasoning
Saccadic training

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Exploration
Responsiveness
Multimodal observation (only available in German language)´
Mental activation (only available in German language)
Spatial operations 3D
Calculations (only available in German language)
Overview and reading (only available in German language)
Occupational training - Exercises attention (only available in German language)
Occupational training - Exercises memory (only available in German language)
Occupational training - Exercises executive functions (only available in German language)
Divided attention 2
Visual attention (only available in German language)
Working memory
Restoration Training
Alertness Training
Memory Strategy Training
Visual Exploration
Vigilance 2
Sustained Attention
Exploration 2
Spatial Operations 2

Not every therapy module is available in all countries/regions. The availability depends on state of translation and localisation.
For a list of screening modules please refer to chapter "Screening and diagnostics".

8.6 Therapy prescriptions / teletherapy

RehaCom offers the possibility to apply a widely independent but **observed training** to a client. This option is relevant for clients who have well advanced in their cognitive therapy and want to continue training in a clinic, an ambulant setting or at home.

The therapist defines a therapy, setting up the module to be used how often and with which parameters. Additionally the therapist can monitor the result of the patient's work from a distance.

The client is working in the patient mode at a PC, not having access to the RehaCom system. He can only run those therapy modules defined by the therapist.

Defining therapy prescriptions

Therapy prescriptions are defined in the window Client data, at the tab **Prescriptions**.

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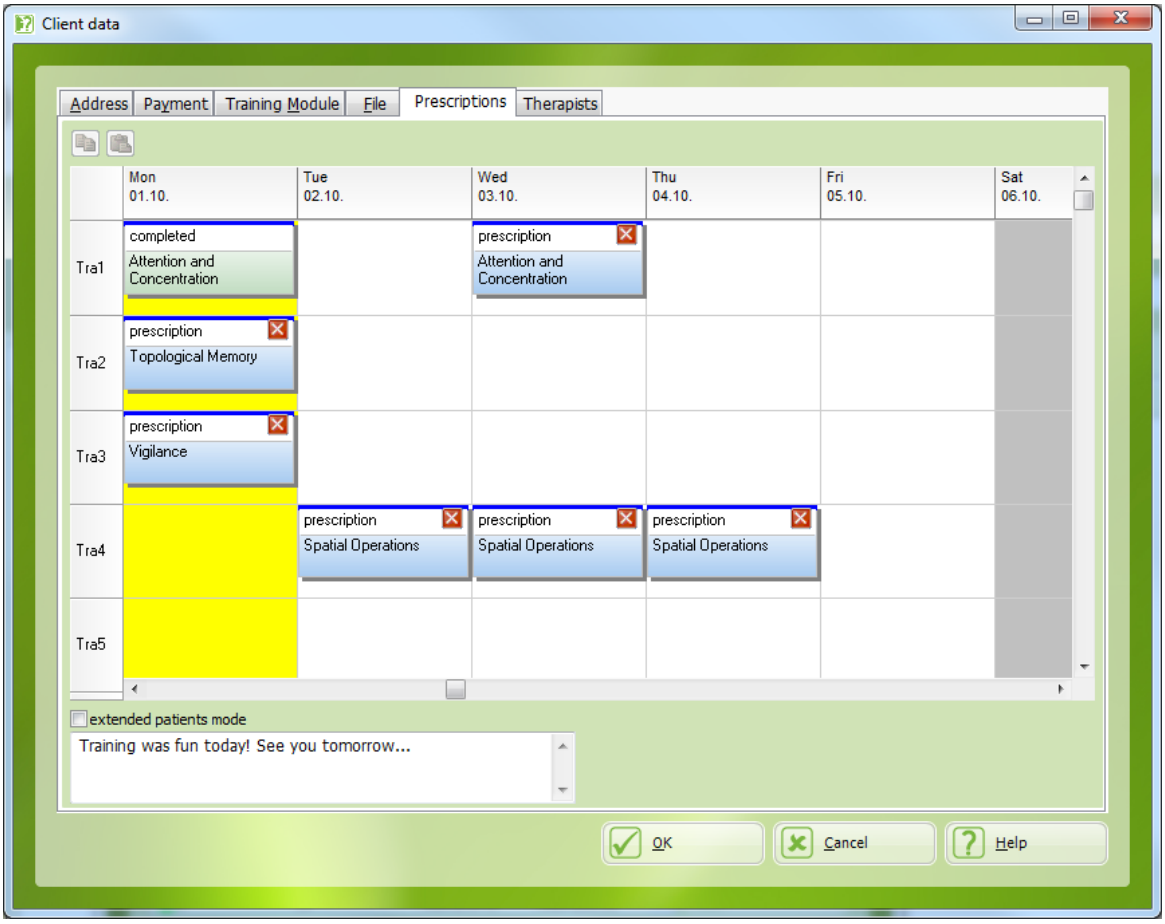

Window "Client data", tabsheet "Prescriptions"

A **timetable** is displayed. The therapy modules the client is supposed to train are defined for every day.
The current date is marked yellow.

In the shown example, 3 prescriptions are defined for Monday. One prescription is completed, the other prescription has not yet been done.
If a completed prescription is chosen (double-click), the therapist can see the results. After the end of the training, the patient can leave a message for the therapist (see patient mode). These messages are shown at the bottom left field and are sent by email to the therapist.

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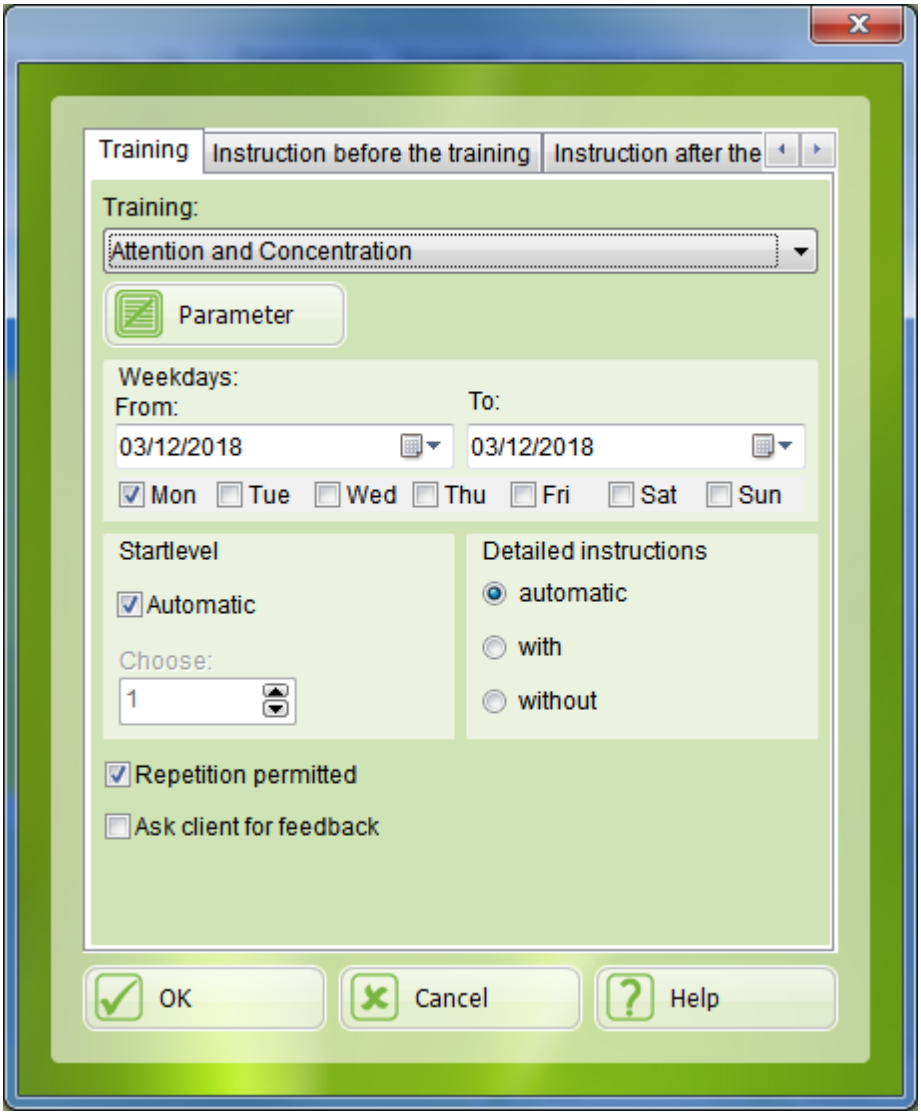
Create and edit prescriptions

If you click on an empty range in the **timetable** or an existing prescription, the window "New prescription" or "Edit prescription" respectively appears.



Window "New prescription"

In this window prescriptions are created and adjusted.

Training

Select the training to be done.

Parameter

Adjust the therapy module in detail (see training parameters).

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If you don't use the button, the patient's last settings are kept.

Days of week

You can define the same prescription for a time range.

Start level

automated: This setting supports adaptive Training. The client starts training at the same level where he has finished last time.
choose: The therapist defines, at which level of difficulty the training will start.

Long instructions

The long instructions are shown before the training in order to explain the assignments to the the patient. It can be switched on or off.
Automated means: during first 2 sessions, the patient will get instructions; from 3rd session onwards, no instruction is shown. From now on the patient can get instructions by clicking the red minus button if needed.

Repetition permitted

If this checkbox is marked, the patient can perform the trainings of the given day as often as he wants.
If this option is switched off, the training can only be done once.

Ask for patient's feedback

When this checkbox is checked, the patient can leave a message for the therapist at the end of the session.

Licensing via...
If both therapist and patient are licensing via Internet, it is possible for the therapist to provide licenses for the patient. This can be activated with this option.

Instruction before the training

At this tabsheet you can give special instructions. These Instructions are shown when the client starts the training.

Instruction after the training

At this tabsheet you can give special instructions. These Instructions are shown when the client ends the training.

Extended patients mode

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When this option is checked, the patient can use the "Patient mode" without prescriptions assigned by the therapist. I.e. on days without given prescriptions the patient can start all therapy modules which he worked with at an earlier date. The previous training settings will be used in this case. This option allows a therapist a "middle" way. There is no need to define the patient's tasks for every day. But yet the patient can only use therapy modules chosen by the therapist.

Work with prescriptions

The patient will work through the assigned prescriptions in the "patient mode".

8.7 Patient mode

The "Patient mode" will be switched on by use of menu "System"->"Patient mode". If RehaCom is in patient mode, the patient has only a **limited access** to RehaCom functionality.

The patient mode was designed in order to allow the patient to work with **prescriptions** autonomously, without bothering about the complex handling of RehaCom.
In addition, the patient mode benefits the data security, since in this mode, therapy data of other clients is not accessible.

There are two ways to transfer data from therapist's computer to patient's home: by use of RehaCom web server (internet) or by use of an USB flash drive.

Supervision by data drive: The therapist assigns prescriptions. When the therapy plan of the patient is complete, the patient's data is exported to a data drive (e.g. USB flash drive) in the window Select a client. The patient can take home the USB flash drive and connect it to the his PC before starting RehaCom. After login with name and password, the prescriptions are read from the USB flash drive. The patient is working through the assignments. After training, all results are automatically stored back to the USB flash drive. The patient brings back the data media to the therapist, who can import the data and look at the patient's practice at home.

Supervision by internet: The therapist assigns prescriptions. When the therapy plan of the patient is complete, the patient's data is automatically transferred to the Internet server. After login with name and password, the prescriptions are loaded from the Internet server. The patient is working through the assignments. After training, all results are automatically stored back to Internet. If the therapist opens the window Edit client, all results are read from the internet, the therapist can look at the patient's practice at home.

At first login in the patient mode, the patient has to indicate whether his data is supposed to be read from an USB flash drive or from the internet.

As long as RehaCom is in the patient mode, RehaCom starts with the following

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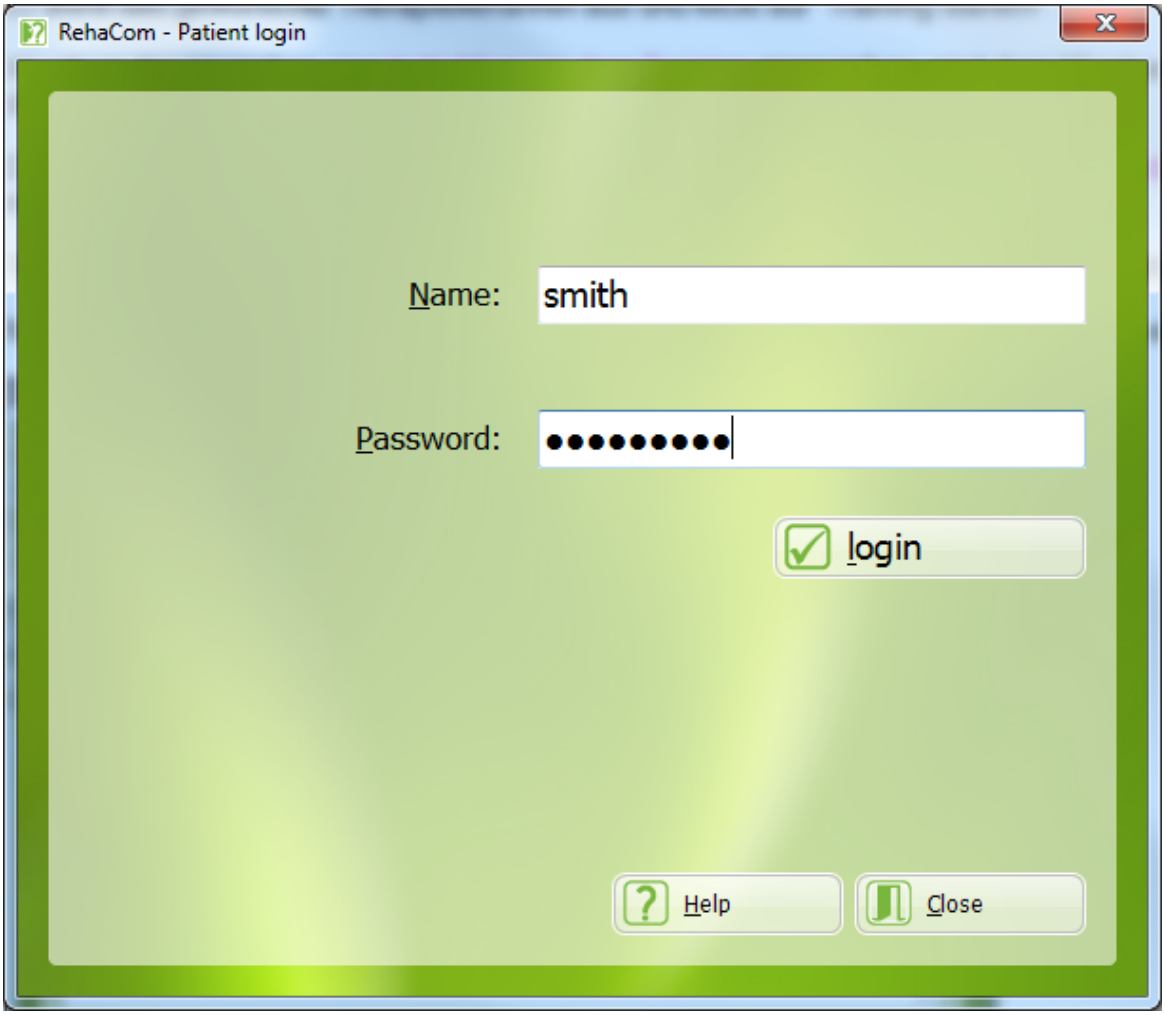
initial display:



Start screen patient mode

To use RehaCom as therapist, you press the combination of keys "Ctrl-t" at the start screen in order to return to the regular RehaCom mode.

You can adjust additional options for patient mode at window "System -> Settings". Here it is possible to block all Windows functions in the patient mode (client can't access the operating system) and to automatically load RehaCom when Windows™ is started.

Login of client

The client has to login to the RehaCom system by use of name and password (name and password for the client are specified in the window "edit client").
If a supervised training is configured in the system (menu "User mode"), the computer automatically loads actual prescriptions:

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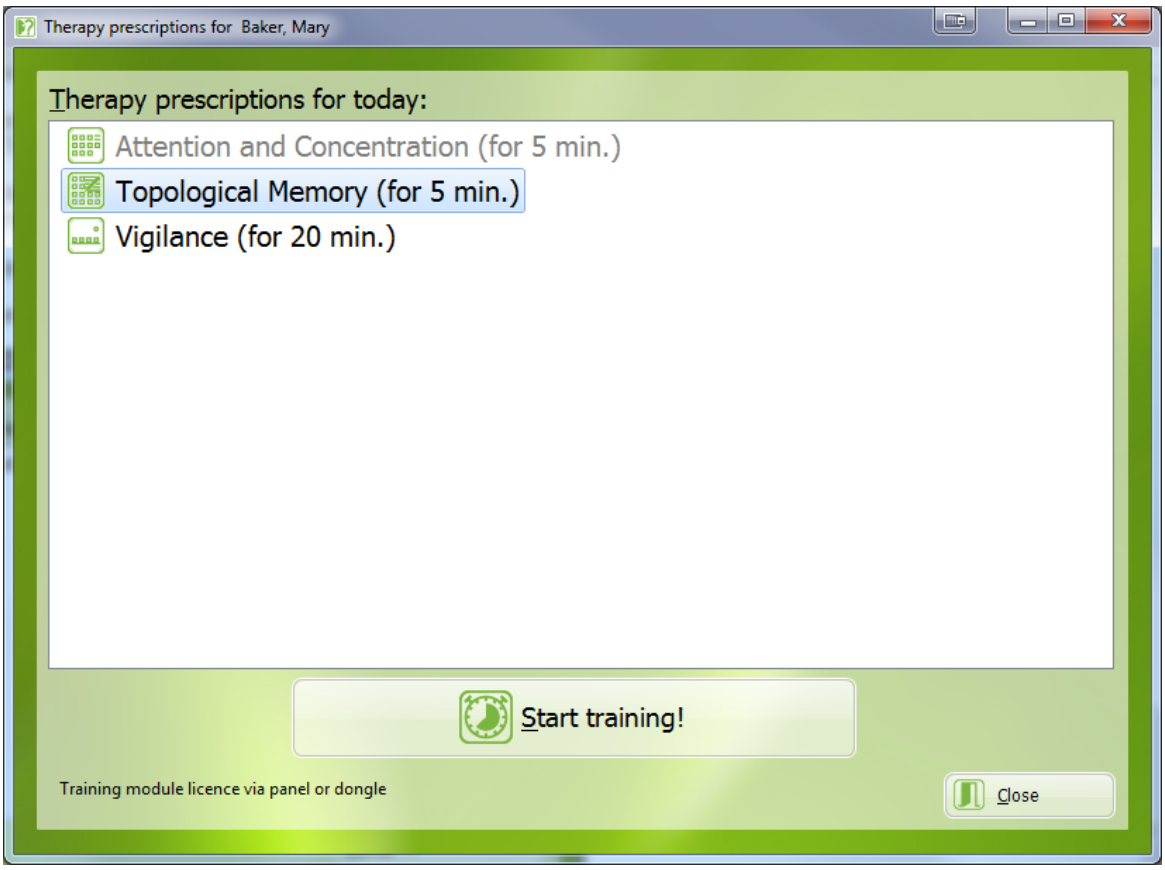
- if Internet data transfer is adjusted, the data is loaded from RehaCom web server,
- if data transfer by **file export** is adjusted, the data is loaded from data drive (e.g. **USB flash drive**).

After login the window "Therapy prescriptions" appears.



Window "Therapy prescriptions"

The client has already finished one prescription (gray). Two prescriptions (black) are still to be done.

Run the training

In the window "Therapy prescriptions" the modules to be done by the patient today are listed. He can choose freely, which module he wants to do first.
After selecting a module he presses "Start training!".

If **instructions** before the training are defined, these will be displayed.

The client works through the training. When the duration of training (adjusted at parameter menu) is completed, the client will get a message and the training is finished.

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If **instructions** after the training are defined, these will be displayed.

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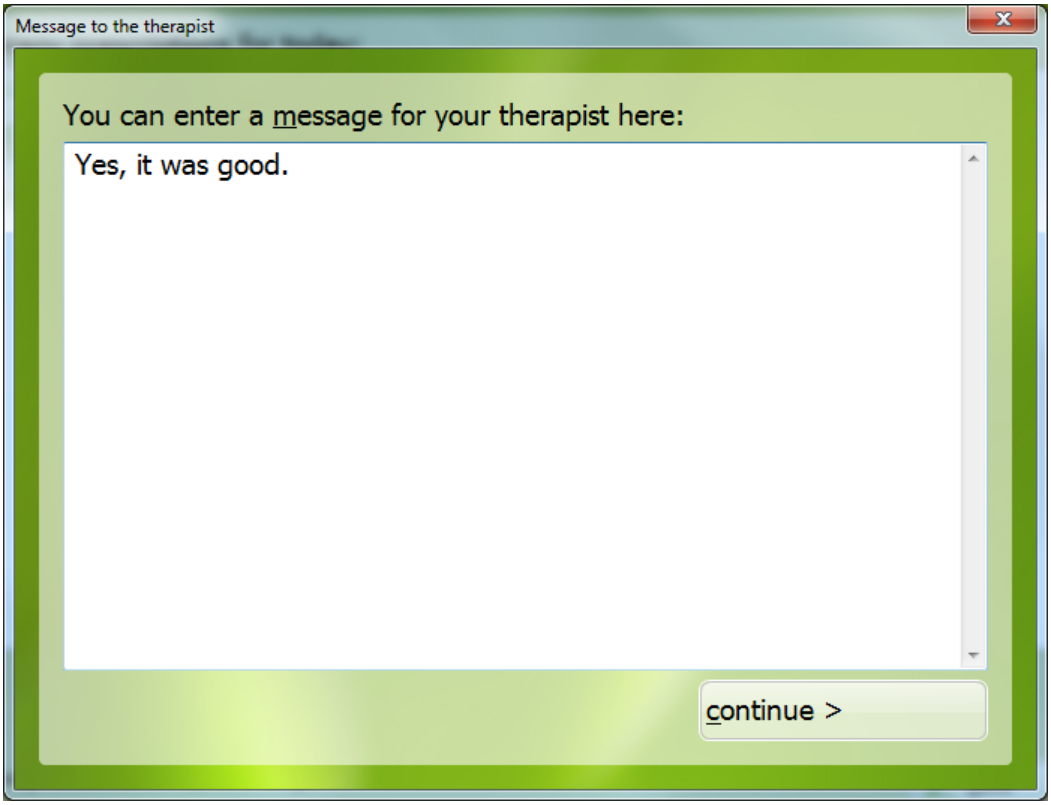
After the end of the training, the patient will have the chance to send a **message** to the therapist.



Message to the therapist

By clicking "continue>", the message is sent to the therapist by email.

Returning to the window "Therapy prescriptions", the finished training is marked gray.
Now the client can choose the next module.

If all prescriptions are done, he receives a message accordingly. Now the patient can log off pressing the button "Close". The system returns to the start screen (login) in the patient mode.
If supervision is configured for the client, the stored training results and messages are exported for the therapist.

- During Internet supervision, the system makes an automated upload to the RehaCom web server,
- During supervision by **file export,** all data is stored to the data drive (e.g. **USB flash drive**) automatically.

By returning to the start screen, the next client may register for training (at therapy departments in hospitals and health care centers).

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To return from patient mode to the RehaCom main window, the key combination Ctrl-T is used. A **password** can be set in addition, to secure the return from patient mode. This password is set in the window System -> Settings.

Extended patients mode

When the therapist did not set up a prescription for the current day and the option "Extended patients mode" is checked, all modules assigned to the client are shown. The therapist can delete or assign additional modules to the patient at window "Edit patient", tabsheet "Therapy modules".

Export and delete client data

Help in client mode

For every registered client, it is possible to export all personal data into an xlsx file format via the button "Export user data".

If the data is to be completely deleted, this can be done via the button "Delete user data". A request for deletion of all data will be sent to HASOMED.
Caution: This request will result in the PERMANENT deletion of all data concerning your person. This concerns personal user data, history and result data.

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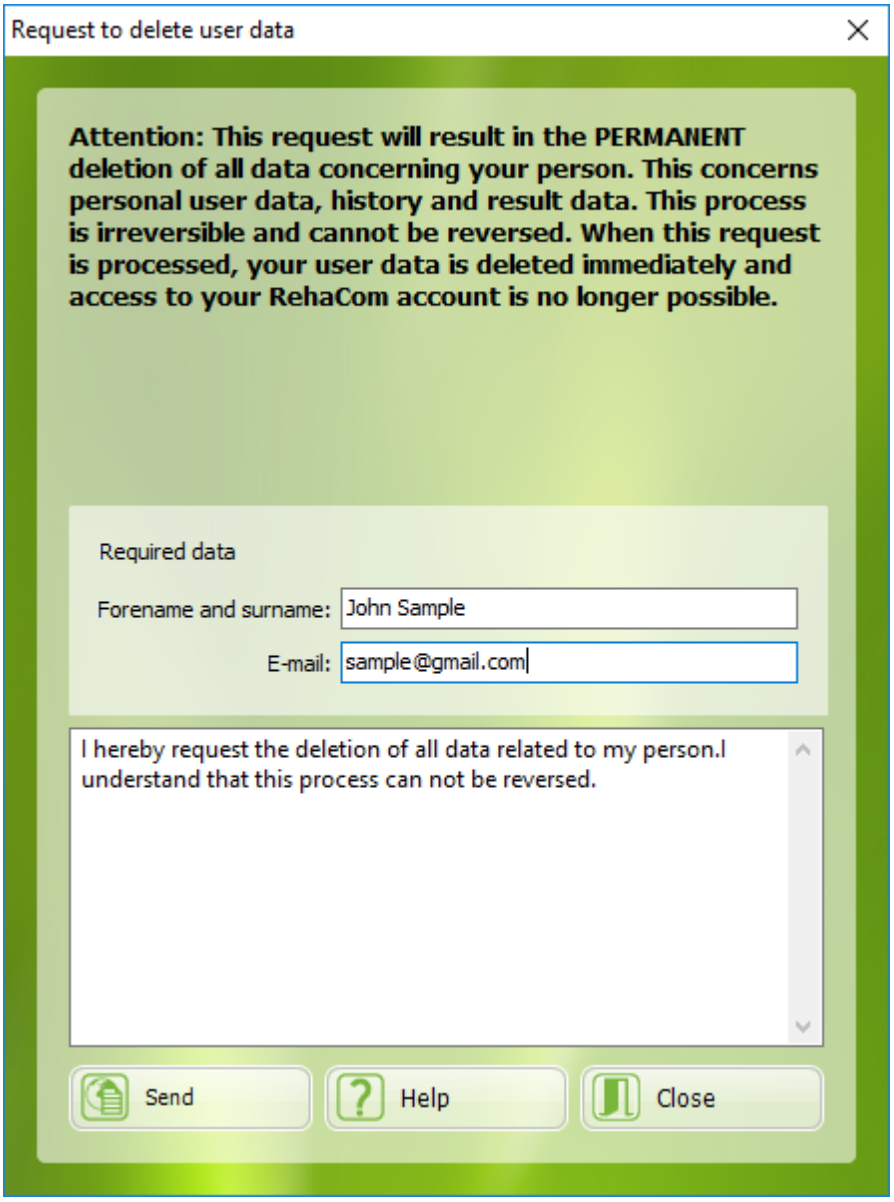
This process is irreversible and cannot be reversed. When this request is processed, your user data is deleted immediately and access to your RehaCom account is no longer possible. With the deletion of the user data any claim to user-linked license data also lapses.



Form for the request to delete user data

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9 Result evaluation

9.1 Therapy results

The analysis of process data is an important instrument for the therapist to find the best possible training strategies.

There are several possibilities for a performance data analysis:

- during the training: via the therapist menu (see chapter Crash course RehaCom) after interrupting the training which should only be done in exceptional cases.
- at the end of the training when the client's graph of performance shows up automatically. The final talk of therapist and client is based on it.
- any time later: with the button **Results** in the main window, given the client is selected (see Select a client).

If you use the button **Results**, the window **Result evaluation** appears.

(At tab "Therapy") on left hand side of the window one can find a list of all modules used by the patient. Clicking a module's name the results are shown in the middle of the screen.

An analysis graphic opens consisting of 3 tabs:

- **Results** (for the therapist),
- **Level progression** (for the client) and
- **Table and Chart** (as a summary).

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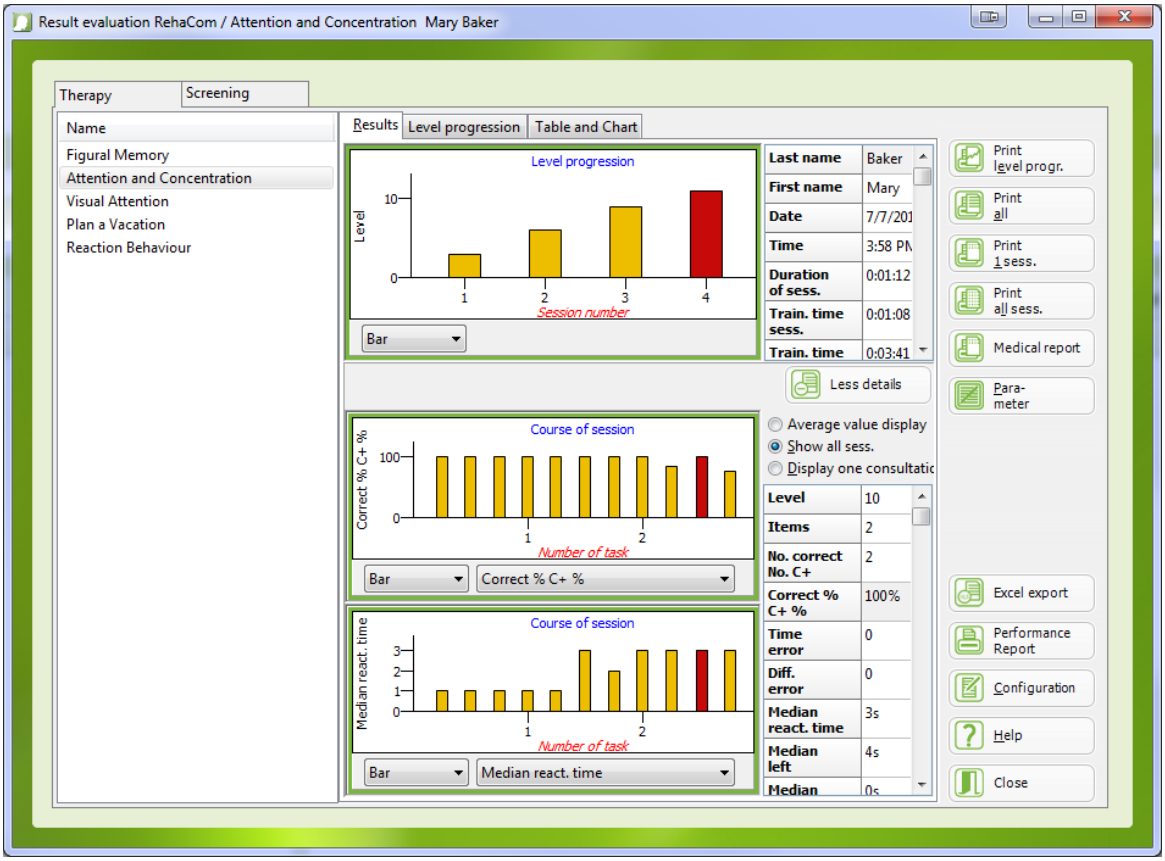
Tab Results

The tab **Results** provides the therapist with detailed information about the training progress, performance deficits and capacities.



Window "Result evaluation", tab "Results"

The upper graphic **Course of training** shows the level of difficulty reached at the end of each session. The table next to it provides details ***about the session selected and marked with the red bar:***

- Name and first name of the client,
- date and time at the start of the session,
- the length of session: the overall time between start and the appearing of the graph of performance,
- the total (effective) time is ***the time when the client actually trained*** (overall length of session minus time for instructions, breaks etc.) and
- the cumulative time is the sum of the total (effective) times of all sessions so far.

To select a session, click on the bar.

In order to evaluate data in detail, the therapist can click on button "More details", to hide details one can click "Less details".

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The lower graph **Course of session** provides two details about the course of ***every single task of a session***. The table next to it gives details ***about the task selected and marked with the red bar***. A task is selected by clicking at the bar. The table tells you

- the level of difficulty of this task,
- result details (explained at manual of each therapy module)
- the effective time taken to solve the task, and
- the number of "breaks": interruptions by the patient through pressing the red minus-button on the RehaCom Keyboard.

The **effective time** includes the overall length of a task (instruction+ acquisition + start+ solving the task+ feedback+ possibly loading of sounds etc.) but not the breaks set up by the patient (minus-button).

Below each result graph one can choose:

- how the graph should look like (bars or lines),
- which result detail is shown at the graph (e.g. number of errors or reaction time, depends on the kind of module).

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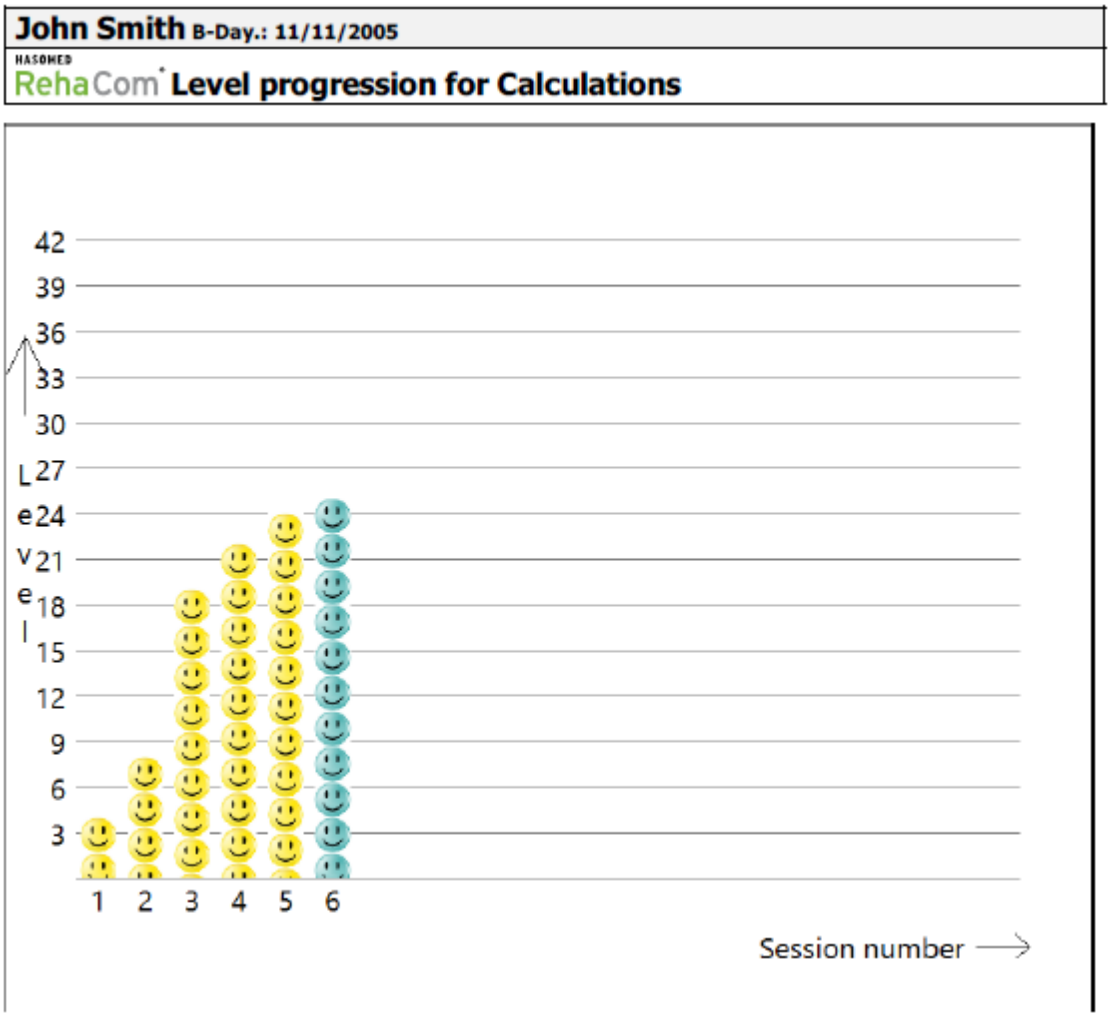
Tab Level progression

The tab **Level progression** for the client, in the shape of a bar chart, shows the training progress over all the sessions - the higher the bar, the better the performance (see also chapter Crash course RehaCom). With the button **Print level progr.**, the bar chart can be printed and handed over to the client. The motivation in the client is improved when he/she can show the progress of "his/her work" to his/her relatives. In children up to 14 years, "smileys" are used instead of the bars. The more smileys, the better the performance.



Level progression graph for children

Tab Table and Chart

This tab shows a summary of the most important therapy results for the session. Which results are shown is described at the manual of each module.
The view **Table and Chart** can be exported to a PDF by pressing the button **Print 1 sess.**

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The buttons **Print all**, **Print 1 session** and **Print all sessions** creating PDF files for performance documentation. Later one can print the PDF files or save it to the hospitals therapy documentation.

The PDF **Print all** is the same in all RehaCom modules and provides details about

- the session number (serial numbering of sessions),
- date and time the session has started,
- level at the begin and the end of the session and the highest level achieved in the session,
- the length of session, the effective training time, the cumulative training time and the number of interruptions as described above,
- the therapist which had lead the session.

The content of both lists **Print 1 session** and **Print all sessions** is module specific and is explained in the corresponding manuals.

Medical report

The medical report is the easiest and quickest way for therapy documentation. By one click a complete documentation letter is created.
The content and structure of the medical report can be changed by button Configuration.

Button Parameter

The button **Parameter** informs about which parameter adjustments were used in the particular task. The parameters can be viewed, but not changed (the OK-button is switched off).

Button Excel export

All result data of the currently shown client can be exported to an Excel file. When the therapist clicks on **Excel export** the user is asked for a directory and file name.
By this option it is possible to continue RehaCom result data evaluation by any other programme for **statistics** or **scientific analysis**.

Button Performance Report

See chapter Report.

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9.1.1 Medical report configuration

The **Medical report** is a quick and easy way to document patients rehabilitation process to insurances or clinic management.
The therapist can create the report in the window Result evaluation by clicking a button.

Content and **format** of the **Medical report** can be set up in the window **Configuration**.

Variables and **text modules** are used to generate the Medial report.

The Medical report consists of following parts:

- Hospital (clinic) logo
- Patient's information
- Module name
- Text defined in "Text 1"
- Bar chart "Level progression"
- Text defined in "Text 2"
- Table with summary of chosen session (as shown in tab Table and Chart)
- Text defined in "Text 3"

A basic version of text modules "Text 1", "Text 2" and "Text 3" are predefined. The user can add text modules by clicking the tab "+".
During editing the text module, placeholders describing the patient and the therapy session can be inserted by right clicking at text input field.

To every kind of new text module combination a **Short name** is given. By this **Short name** the template can be chosen at printout.

Clinic logo

Every by RehaCom generated PDF document is headlined by a **clinic logo**.
At tab Clinic logo the **graphics file** (of any format, e.g. jpg, png, tiff, bmp, ...) can be chosen by clicking the **Select a file** button.
In addition the **Clinic name** as text can be used.
Position of Clinic name and logo can be adjusted.

9.2 Screening results

The results of the screening tests can be viewed with the button "Results" -> tab "Screening"

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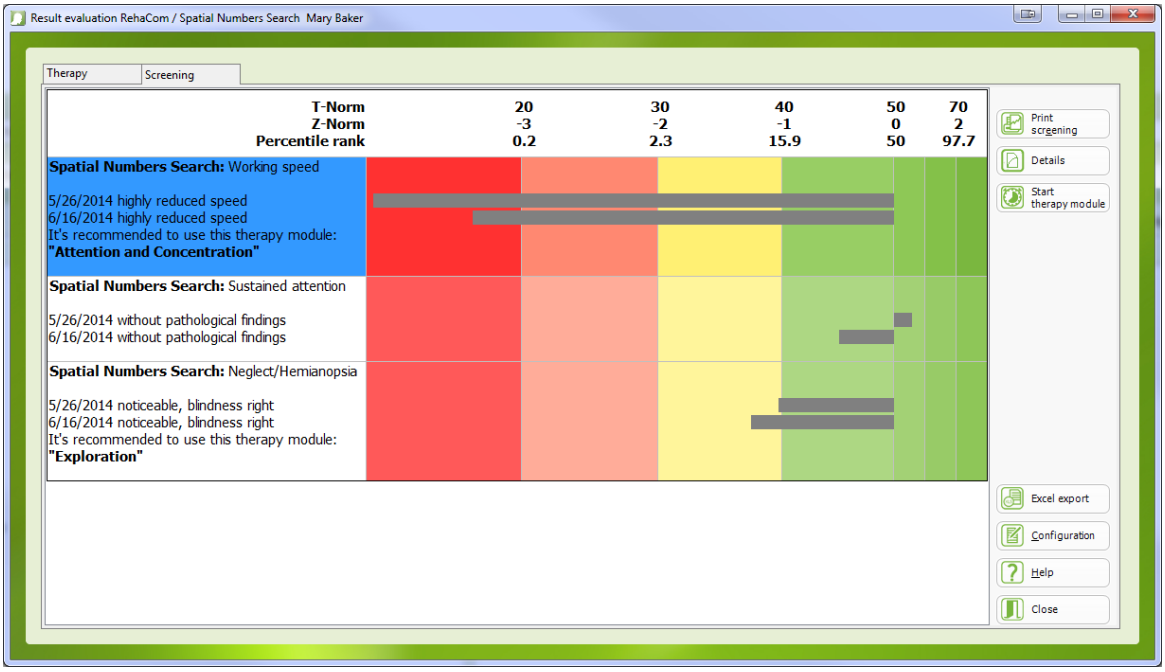

Screening result representation

Verbal representation

On the left-hand side of the graph (area with a white background and text), the screening result is summarised.
In the first line, the name of the screening is displayed, followed by the type of the result value. The screening "Spatial Numbers Search" for instance provides three results for every screening session (for additional details see screening manual).

Below the name, the date of the screening is displayed. Behind the date, the result is summarised. A verbal assessment (e.g. "conspicuous") is given.
For every use of a screening, a new result is produced.

When the result displays any findings, the recommended therapy module is given as well.

Graphical representation

On the right-hand side of the graph (coloured area with bars), the statistical values of the screening result are displayed. Statistical values are T-norm, Z-norm and Percentile rank.
All screening results are compared to data achieved from a group of healthy people (normative values, volunteers).

A bar originating from the 50 mark and running to the right indicates the screened person's results being higher than the average of volunteers. A bar running to the left indicates the performance is lower than the average of volunteers. The further the bar is to the left, the worse the performance of the patient at this time.

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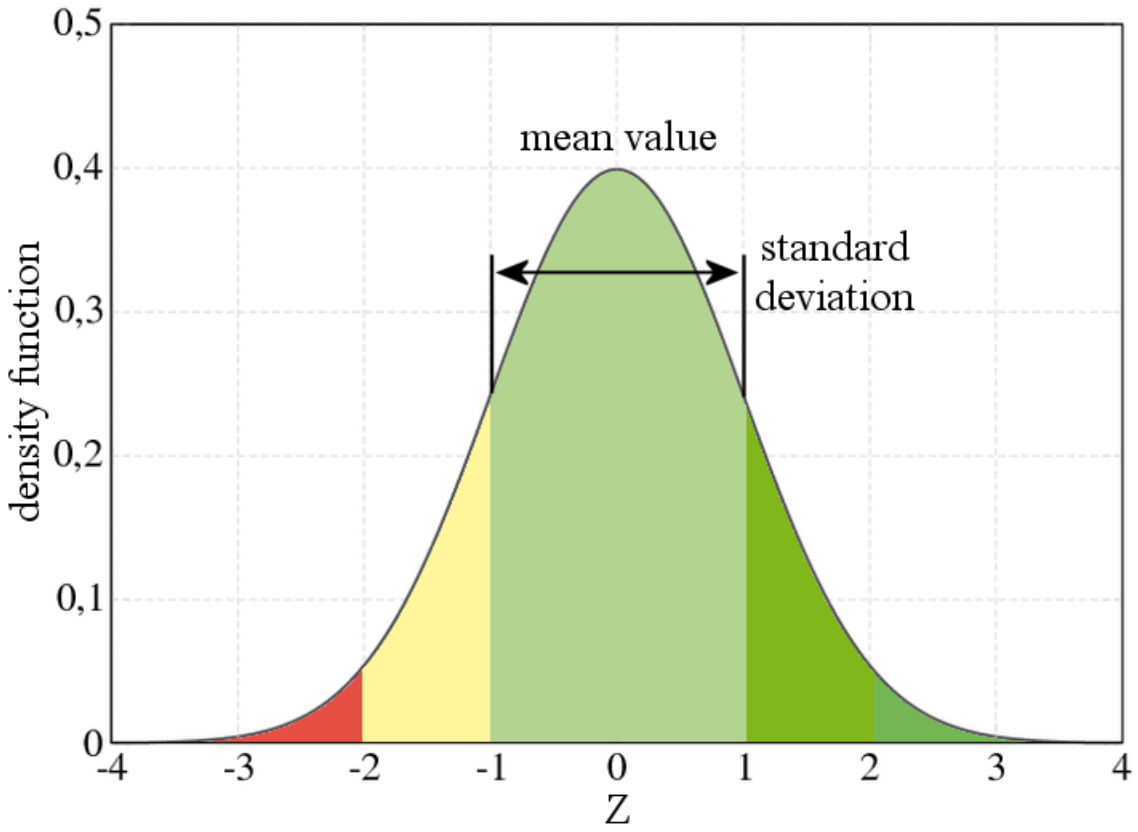
Each colour behind the bar represents the amount of deviation from the average of the norm.

Very conspicuous deviation from the norm
(Distance from the average greater than 2 standard deviations)

Result is conspicuous (but not pathological)
(Distance from the average greater than 1 standard deviation)

Result in the normal range
(Distance from the average smaller than 1 standard deviation or better)



Normal distribution (Gaussian curve)

All screenings were standardised with (at least 200) healthy test persons of all age groups. While determining the norm range, the age and the gender of the patient are taken into account.

Print screening

An overview of all screening results is printed to a PDF file.

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Details

Besides the rough assessments of the test results with the T and Z values, a detailed analysis is available for every screening.
The detailed analysis can be reached via "Details".
Contents of the detailed analysis are described in the manuals of each screening.

Start therapy module

When a screening result indicates the need for a therapy, the therapy module can be started by using the button "Start therapy module".

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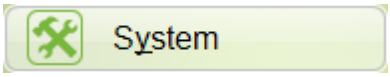
10 System adjustments

10.1 System parameter

The button



opens up a menu for adjusting RehaCom to your specific requirements. Please remember that before starting the first training a few but important system settings are required.

Window System parameter.

- Settings: adjust RehaCom to a computer network,
- User mode: setting, whether RehaCom is used by a therapist or patient,
- Panel/Dongle: check and adjust the RehaCom Keyboard or the dongle,
- Licensing mode: different modes of licensing can be chosen,
- License: enter license codes (activate modules),
- Backup/Restore: securing the RehaCom data base,
- Volume RehaCom: check the volume for the acoustic feedback,
- Patient mode: RehaCom is switched to patient mode,
- Start Service: start a service routine in arrangement with the RehaCom service.

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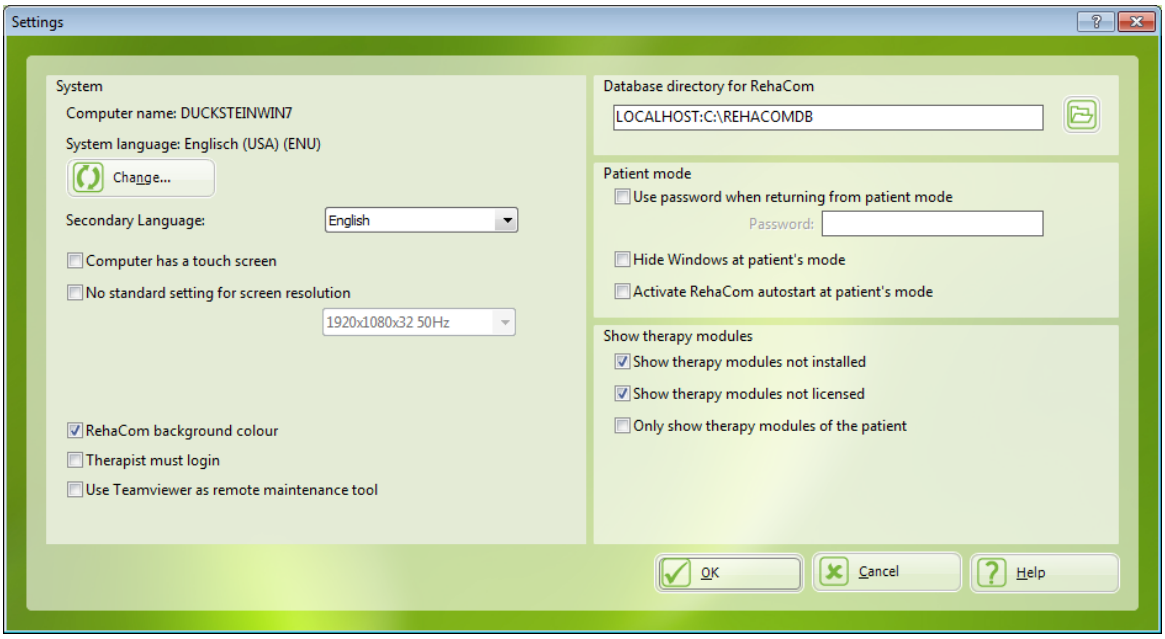
10.2 Settings

Click **Settings** in the window System parameter or use the menu **System/Settings** to open the Settings window.



Settings w indow

The upper line shows RehaCom's current **system language**. This is the **language** the therapist operates RehaCom. It is used in all windows for entering clients, defining modules, modifying parameters and analysing.
When the therapy starts, the language changes to the patient's language. The patient's language can be adjusted separately in the window client data.

Secondary language

RehaCom therapy modules are translated into many languages. This makes it possible for the client to mostly work in his/her national language.
But not all therapy modules are available in all languages. If a therapy module is not yet translated, the system language will be used for training by default.
By "Secondary language" you can change this rule. Here it is defined, to which translation RehaCom falls back if a module is not available in the client's mother tongue.

Computer has touchscreen

The option makes the adjustment of standard parameters more easy.
If the computer is equipped with touchscreen and the therapy module permits an operation by touchscreen, this option is used as standard parameter.

Screen resolution

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In normal case, the RehaCom modules adapt to the screen resolution of the Windows™ system. Sometimes the PC's graphics card is too weak (low performance) to display RehaCom graphics. In this case, the user may choose a lower resolution in order to increase the speed of graphics display.

Rehacom Webserver

In case of a supervised training session (teletherapy, patients work at home), the patient's prescriptions and the patient's results will be transported using a web server. The name of the server can be changed in regard to the location of both patient and therapist. The storage and transport of the patient's data via the server is encrypted and follows the rules of data security.

RehaCom background color

The use of the typical green RehaCom color can be switched off.

Therapist must login

For data security reasons, the therapist may need to login to the RehaCom system. See chapter Login therapist.

Use Teamviewer as remote maintenance tool

There are two remote maintenance tools available with Rehacom. The more popular one is called AnyDesk and will by start be the default to be able to help you via remote maintenance. If you are unable to start AnyDesk, this option allows you to start the second remote maintenance tool, Team Viewer, by default.

Use Rehacom print preview

A print preview that comes with RehaCom will show a preview of your printouts. Alternatively, you can use your standard PDF-viewer (e.g. Adobe Reader). In this case, please deactivate the option "Use RehaCom print preview".

Database directory

There are 2 ways for a RehaCom database setup:

- local database
- network database

A **local database** is used when there is **only one workplace** where RehaCom is used. Smaller rehabilitation facilities are using only one computer for cognitive therapy. In this case, the database is stored at the local hard disk drive of the PC. In this case, the correct setup is **LOCALHOST:C:\REHACOMDB**.

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A **network database** is used when there are **several workplaces and a computer network.** All patients data from different computers should be collected on a central place. The database should be set up to a network server (see also Network installation). Database details can be set up by use of the button . Ask your network administrator for details.

Password returning from patient mode

When the client works in patient mode he/she may return to the RehaCom system by key combination Ctrl-t . In some cases the therapist might not want to allow this. In that case, the therapist can secure the return from patient mode by an additional password. Thus, it can be prevented that patients have access to data of other patients during unsupervised training (**data protection**).

Hide Windows at patient mode

In patient mode, the client is to train independently at the computer. Usually he/she should not have the possibility of using any other function of the computer.
In order to prevent the client using other Windows functions (Windows Hotkeys, starting menu, installed programmes), one can fade out the Windows system. However, this option is no hacker protection! Experienced users have always the possibility to use the Windows system.

Activate RehaCom autostart at patient mode

In patient mode, the client has to train independently at the computer. Untrained clients are often not able to start a programme under Windows™. For this reason, you can use this option here, which starts RehaCom immediately after the start of Windows operating system. Even shuts down the Windows system automatically, after closing RehaCom.
With this option, the client has the possibility of working with RehaCom after switching on the computer, even if he/she does not have any **Windows™** experience.

Show therapy modules

In recent years, the number of RehaCom training modules has considerably increased. At the same time, opportunities in licencing have grown.
Therefore, you have the possibility to improve the clearness of your RehaCom system by hiding ***non installed modules*** and ***non licensed modules*** (remove tick in the corresponding checkbox).

Show Module Abbreviations

Corresponding abbreviations appear next to the names of the therapy modules in

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the RehaCom main window.

10.2.1 Network installation

When there is more than one RehaCom computer in a hospital/facility, a central network server can be used (see chapter Settings).
The RehaCom network setup has to be done by an administrator or qualified computer expert.
It is strongly recommended to name all computers differently.

The facility may use the server for 3 tasks:

1) As a **file server** for the RehaCom programme
2) As a **database server** for RehaCom database
3) As a **license server** to centrally control the RehaCom licensing for the entire facility .

File server for the RehaCom programme

The server has to share a directory to all users of RehaCom. All RehaCom EXE, DLL, images and sound files are stored at the server and can accessed by the network users.
There is a small portion of system files that have to be installed on each client PC in order to run RehaCom.
The advantage of this version is: When RehaCom offers an update, the administrator has to install the update only on the server, because all clients work with the same data.
For details see chapter RehaCom file server.

Database server for RehaCom database

The RehaCom database is FireBird (freeware, SQL, client-server). The admin doesn't have to share the directory where the database is located, this guarantees a high amount of data security. All data traffic uses SQL and communicates via the network port 3050.
A backup of the database is easy, just set up a cron job for one database file.
The database file is small. It grows only by 1MB per patient.
For details see chapter RehaCom database server.

Licence server to centrally control the RehaCom licencing for the entire facility

This mode isn't available in all countries.

Usually, RehaCom licences are given per computer. The licenses are managed at the RehaCom patients keyboard (RehaCom Keyboard).
A hospital/facility can manage RehaCom as concurrent user licenses too. Because

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not every RehaCom license is used on every computer at the same time, the hospital can save money this way.
The “license server” is a service that runs on the server (Win7 is possible), which is protected by a dongle (USB).
For details see chapter RehaCom license server.

All 3 tasks can run on the same server. The server requirements are very low. In fact there is no server operating system needed. A “Windows 7“ server is enough.
All servers are tested with VMWare virtual systems.

Firewall

The database server uses port 3050, the license server uses port 8080.
Not in all cases these ports are opened in the Windows **firewall**. If there is no communication between server and client, please follow steps:
Windows Start button -> System control
Click on Windows firewall -> Advanced settings (requires administrator rights)
Click on "Incoming rules" on the left
"New rule..." on the right
Rule type: select "Port" -> Next ->
Report and ports: select "TCP", enter "Specific local ports: **3050** or **8080** " -> Next ->
Action: "allow connection" -> Next ->
Profile: set all checkmarks -> Next ->
Name: "Firebird database server" or "RehaCom license server" -> Finish

(This example applies to the Windows **firewall** in Windows7. If you use another firewall, please read the corresponding manual.)

The **min. requirements** for the server are:

Computer with 2 GHz, 4GB of RAM and 200GB HDD
Win7 Prof/Win8 operating system (no problems on windows server 2008 and upward)
Network connection, fixed NETBIOS name to access to database and licenses server by name
(USB-connector if the license server is operated)

10.2.1.1 RehaCom file server

How to install a file server for the RehaCom programme?

Install RehaCom **on server** by use of [DVD-drive]:\Setup.exe
The Setup programme suggests to install RehaCom at directory C:\Program Files (x86)\RehaCom6 .
The admin may choose another directory, this directory has to be shared to all

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RehaCom users.
For RehaCom components choose "Standard" to make sure all files are available.

Install RehaCom **on client's PC** by use of [DVD-drive]:\Setup.exe
For RehaCom components choose "Network Installation". Only a minimum of required client system files are installed.
Map a drive to the RehaCom network share. Place a link to RehaCom.exe at clients desktop.

10.2.1.2 RehaCom database server

How to install a database server for RehaCom database?

For the installation two parts are required:
a) the **database server** program "Firebird"
b) the **database files** itself, where the data is saved

Database server: Install the Firebird program on the server [DVD-drive]:\Database **\Firebird-2.0.1.12855-1-Win32.exe .**
All other users at network have to be connected to the server by **TCP/IP** network protocol. When a **firewall** is installed, the admin has to open **port 3050** to enable firebird-database to communicate.

Database files: A small number of database files has to be generated on the server. The admin can:
Install and start RehaCom on the server once. Database files are generated at directory c:\RehaComDB .
or
Install RehaCom on a client PC, start RehaCom there, copy the complete content of database directory c:\RehaComDB to the server .

The database can be located on any drive or directory of the server. The directory doesn't have to be shared with the client.
Clients have to indicate where the database is to be found. Use RehaCom window Settings to set up the name and directory of database-server. Please use the format:

Servername:directory

Servername and directory are divided by "colon".
Servername is the name of the database-server as UNC-name or as IP-address.
Directory is the name of the **local** directory at the server (directory name from the point of view of the server), where the database files are stored.
To check if the Firebird server is running or if the correct directory was given, one has to click on the button (check database) in the window Settings.
In order to learn how to backup the server database read the chapter Backup/

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Restore.

10.2.1.3 RehaCom license server

How to install a license server to share RehaCom concurrent user licenses?

This mode isn't available at all countries.

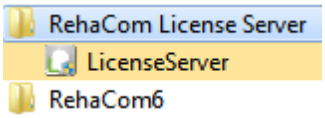
RehaCom can be licensed by an in-house license server. The hospital / facility needs a **license dongle** and **server licenses**.

To install the server please follow these steps:

1) Install **driver** for license dongle: **[DVD-drive]:\Sentinel\Sentinel Protection Installer 7.7.1.exe**
2) Connect license **dongle** to the server
3) Install licensing **service**: **[DVD-drive]:\LicenseServer\LicServerSetup.exe**
4) **Manage** the license server: use Windows™ Control panel, module "RehaComLicense".

Managing the license server / load licenses

The service is managed via module "LicenseServer" in your Windows start menu.



When starting this module, the following window appears:

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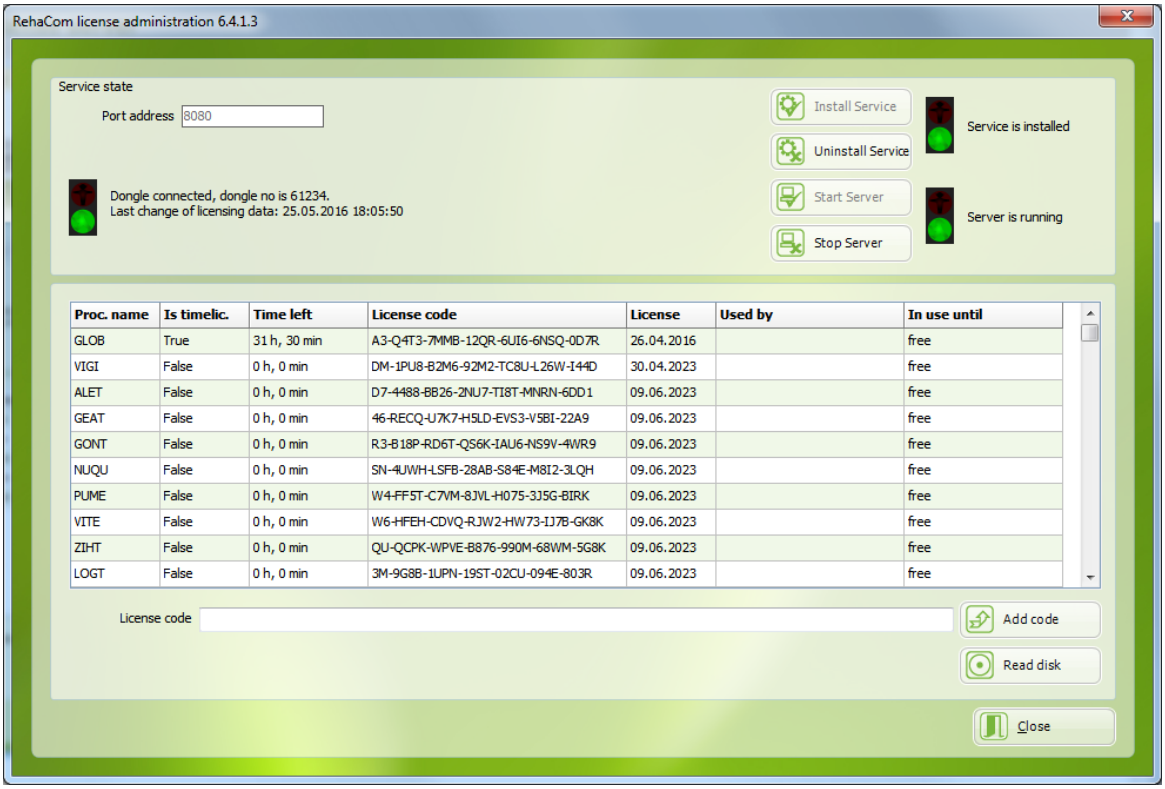

License server control w indow

Port address: You can set the **port** RehaCom clients communicate with the server (SOAP via http). It can be changed after having stopped the server (button "Stop Server", requires registration as administrator).
The used **port** must be set at all clients (see Settings) and must be opened in the firewall configurations. Port 8080 is set by default.

Licenses are stored on the dongle that must be connected to the server.
When the dongle is connected, the existing licenses are listed.

Before first use, licenses must be installed once to the server. Installation of licenses happens via license code, license file or license CD.

License code:	input in the field "License code", click on "Add code"
License file:	when clicking "Read disc", a window appears where you can select the license file (file name REHACODE.RCLIC)
License CD:	insert license CD and click on "Read disc"

After installation is finished, all available licenses are shown in the list.
RehaCom must be installed on all PC's on which licenses should be used. In the menu System -> License mode, the mode "Licensing via license server" is to be set.

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If a license is currently used by any user, the current user and the usage time is indicated in the table. If a license is in use, it is blocked for all other clients during this time.

In case of any errors, the service "RehaComLicensingService6" is listed in Windows "Services" directory and can be manipulated there.

10.2.2 Check database

The freeware SQL client server database Firebird is used by RehaCom. A detailed documentation of Firebird can be found on the internet at http://www.firebirdsql.org.

At the window **Firebird database test** (button at Settings window) you can check, if Firebird works correctly and if RehaCom-database exists. In case of doubt you can create a new (empty) RehaCom-database.

Server name

When RehaCom is used on **local PC** only (single standalone workplace), the Server name is **LOCALHOST**.
When RehaCom is used in a **hospital / facility** network with a central server database, the name of database server has to be entered (**ask your administrator**, see chapter Network installation).
Use the name of the server as it is displayed at Windows network-neighbourhood or IP-address of the server.

Database directory at server

Directory at the local PC or server where the database is located.
When RehaCom is used on **local PC** only (single standalone workplace), the directory is **C:\REHACOMDB** by default.
When RehaCom is used in a **hospital / facility** network with a central server you have to enter the server's local directory name (from the server's point of view, **ask your administrator**).
This directory has to be created by the server administrator. It doesn't have to be shared to other users. Access is organized by the installed Firebird-server-program (client-server-principle).

Button "Test!"

Checking the database by pressing the button **Test!** at the window **Messages,** all results of the test will be listed. If the database works proper, the the message "Database OK!" is displayed at the last line.
There are several error sources at a network. If you get an error-message, there is a detailed description. Since error messages are very specific, please consult a

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specialist in case of problems.

Create new database

By pressing the button "Create", a new, empty database is created. A new database can only be created at a location, where no existing database is found.
If you want to overwrite an existing database, the old database files have to be deleted by hand (all files with extension ***.gdb** at database directory).

Database password

By default the Firebird database password is **masterkey** .
In most cases there is no need to change the database password, because all patient data inside the database are encrypted.
To rise the security level an administrator may decide to change the database password. In this case enter the new password and click "Change" (only the first 8 digits of the password are used by Firebird).
When the database password has been changed on a server, all users have to change the password on each client!
Keep the password safely protected. In case of loss after a possible RehaCom reinstall no RehaCom data is accessible!

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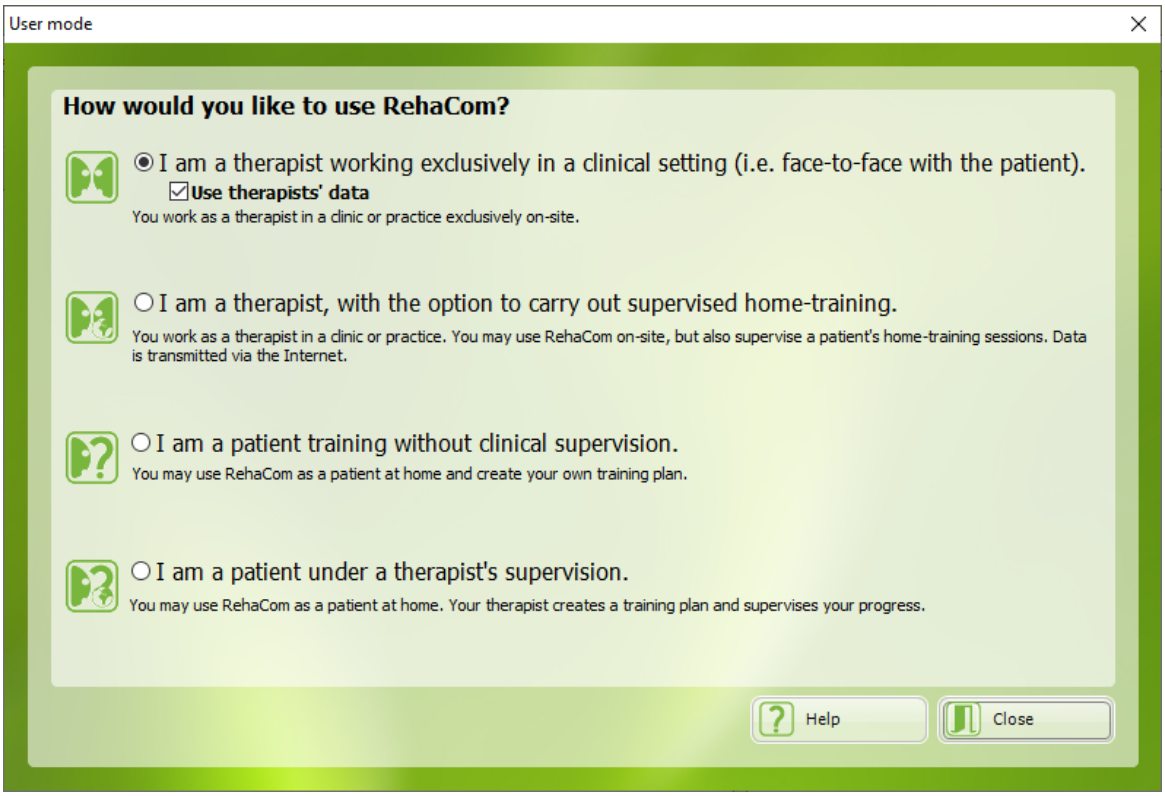
10.3 User mode

You reach the window "User mode" by clicking "System" in the menu.



Window "User mode"

As a therapist

The therapist works in this mode. He can enter, change and observe all **therapy data**.
The therapist has the possibility to edit prescriptions and analyse results after screening and therapy session.

working exclusively in a clinical setting
This setting is used for therapists in hospitals, rehabilitation facilities or practices.
If RehaCom is used by a single therapist only (private practice, small facility), the tick on "Use therapists data" can be removed. In this case all therapist related buttons and menus at the main window will disappear.
If RehaCom is used by more than one therapist, "Use therapists data" has to be checked for data security reasons (see chapter Choose therapist).

with the option to carry out supervised home-training
The therapist can handle (additional) patients at **home therapy / teletherapy**, prescriptions and results are transferred from therapist to patient and reverse.

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The transfer is possible:

- By data media: in the window Select a client, the data is exported to an e.g. **USB flash drive** which the patient may take home.
- By Internet: in the window Edit client, the option **Supervision by Internet** must be activated.

As a client

The client works in this mode. RehaCom's functionality is limited.

without supervision
The patient/client works alone. The user can't edit **prescriptions** or switch to **patient mode**.
with supervision
The client is supervised by a therapist. He can see, but not change any data. Clients should work in the "patient mode".

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10.4 Licence mode

The use of RehaCom is enabled via licence keys.
In this window you can choose, where licence keys are to be saved.

Licencing on this Computer

RehaCom is licenced on the computer you are just using. The RehaCom licence key is generated corresponding to your Windows license key.
The license can't be transferred to any other computer. No device is needed.

Licencing via patient keyboard or dongle

The licencing is done by connected devices (RehaCom patients keyboard (RehaCom Keyboard) or dongle).

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With this type of licencing the licences can be utilized on different computers.
Any computer connected to the patient's keyboard (RehaCom Keyboard) or dongle can be used.

Licencing via licence server

In hospitals and large institutions, RehaCom can be licenced via **licence server**. A **server** within the institution distributes the available licences so that practically RehaCom can be used on any PC (with network connection).
On the server, a separate programme for licence management must be installed (see chapter RehaCom licence server). Your administrator will inform you about the **Server name** and the **Port** to be used.
If necessary, the used port must be unlocked in your firewall. For this purpose, you also find information in chapter Network installation.

For each RehaCom module, various licences can be acquired. If you bought e.g. two licences of "Attention and Concentration", the module "Attention and Concentration" can be used simultaneously on two PC's in your institution.
In case the module is supposed be started on a third PC, you will have to wait for another user to finish his training.
In the window licences the current user of the module is indicated as well as the time it will be available again.

This mode isn't available in all countries.

Licencing via internet

For licencing by internet, no connected device is needed.
Clients and / or therapists have the possibility to order licences by internet.
Immediately before starting the training, an internet connection is established and the licence is booked from the clients or therapists account (see also prescriptions).
This option is not available in all countries. Ask your reseller.

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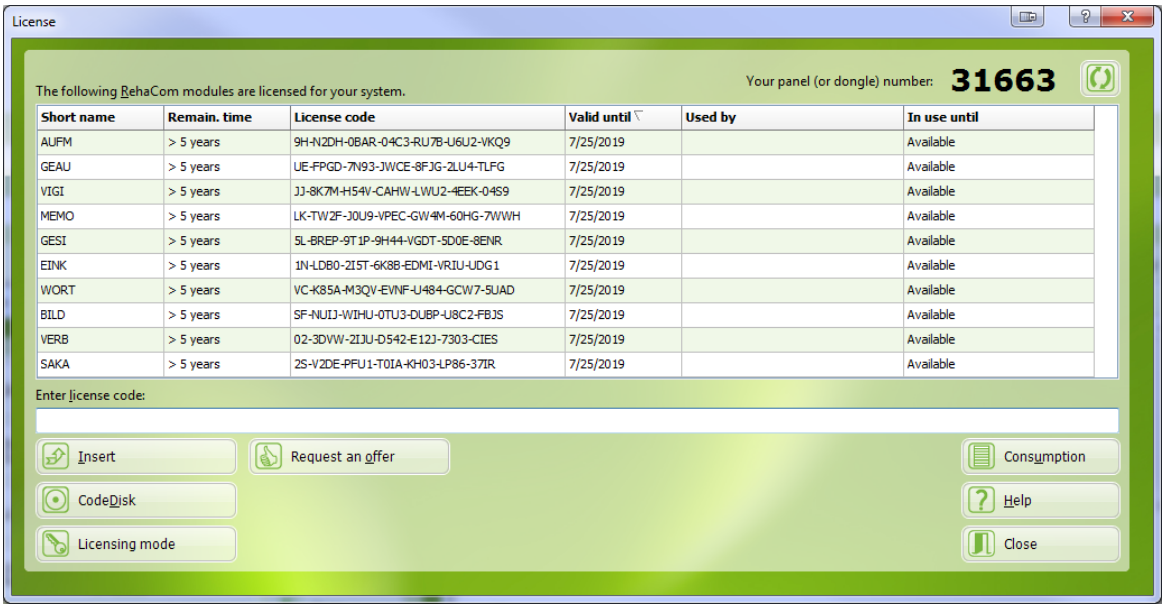
10.5 Licences

RehaCom is licenced by module. Each module is licenced for a limited time. Groups of modules are combined to packages. Ask your reseller for a price list or offer.

To open the licences window click System->Licence.



Window "License"

At the list all licenced modules are shown. In the column "Valid until" the expiration date is shown.

New licences are entered in the edit field and confirmed with **Insert**. If the licence code is incorrect you will be told so. If it is correct, there will be a note in the upper field.

Most licences are sent by Licence code CD. Insert CD into CD drive and press **CodeDisk**. All licences on code CD are loaded.
If the user doesn't have a CD drive or the licence is delivered by email, the user receives the code file REHACODE.LIC or REHACODE-xxxxx.TXT.
In this case, a "load file" window opens up after clicking CodeDisk. Find the directory where the file is located and click "Open".

The best way to order licences is the button "Request an offer". Your reseller is informed by email.
When you prefer to order the licence by phone, the RehaCom Keyboard number or RehaCom-ID is needed. The number is shown on the top of the window (e.g. 31663).

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Server licences

This mode isn't available in all countries.

In the window Licence mode it can be adjusted that the RehaCom licences are no longer managed locally on your PC, but on your in-house licence server.
Thus, a licence pool for an entire institution can be acquired and the licencing for each single computer workstation is omitted. A more flexible use of RehaCom licences is possible.
In the licence list, you find the information about which modules are licenced for your facility and who uses the licence and whether the licence is available at the moment.

Licencing mode "via internet"

This mode isn't available in all countries.

Licences can be booked from account of patient/client or from account of therapist/ clinic/practice.

Booking from client account

RehaCom is booking from the client's account if the option "as client, without supervision" is chosen in window "User mode", or if licencing "through the patient" is chosen in the window "edit prescriptions".

Booking from therapist account

If you want to book licenses from therapist account (or account of clinic / ambulance / practice), you have to:
1. choose "as therapist, with external clients" in window "User mode",
2. setup a therapist, which is registered on the internet,
3. buy licences for this therapist.

At training by prescriptions, the therapist can choose if the therapist or the client should pay the RehaCom usage licence.

10.6 Panel / Dongle

In the window System ->Panel / Dongle the patients keyboard (RehaCom Keyboard) or dongle can be checked for connectivity and functionality.
The window is only available with the Licencing mode "panel or dongle".

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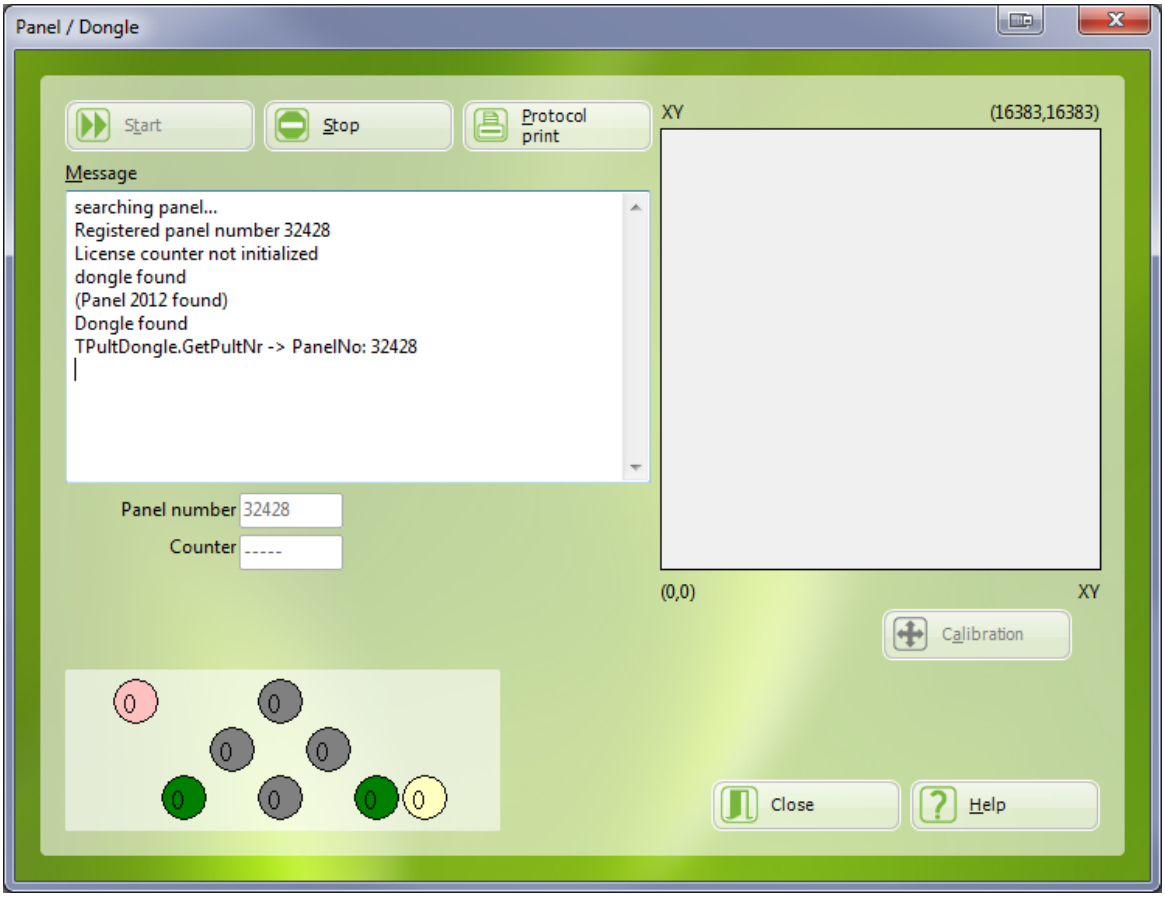

Window "Panel / Donge" w ith connected patients keyboard

The correct functioning of the RehaCom Keyboard buttons can be checked (lower window range). By pressing a button, the corresponding circle changes colour and a counter is incremented.

When a joystick is connected, the function of the joystick can be seen as movement of a little circle in the right gray square. You should be able to reach the field's edges with the joystick.
The joystick is working correctly if the X and Y values in the top-left and the right-bottom-corner are between 0 and 1. If you suspect an error in the joystick calibration (e.g. a client cannot reach the outer edges on the screen),press the button **Calibration**. A window will open up displaying the joystick as a big black dot. Now move the joystick slowly to all 4 corners, the dot on the screen will follow. After moving it into the 4 corners, press any key, and the new calibration will be saved.

With the button **Print protocol,** all results of the RehaCom Keyboard test are printed out. The RehaCom service is going to ask you for it in case of an error.

RehaCom Keyboards and dongles are classified as maintenance-free. A maintenance interval is not fixed.

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CAUTION: Disinfect patients keyboard before every use. Use disinfectant wet wipes.

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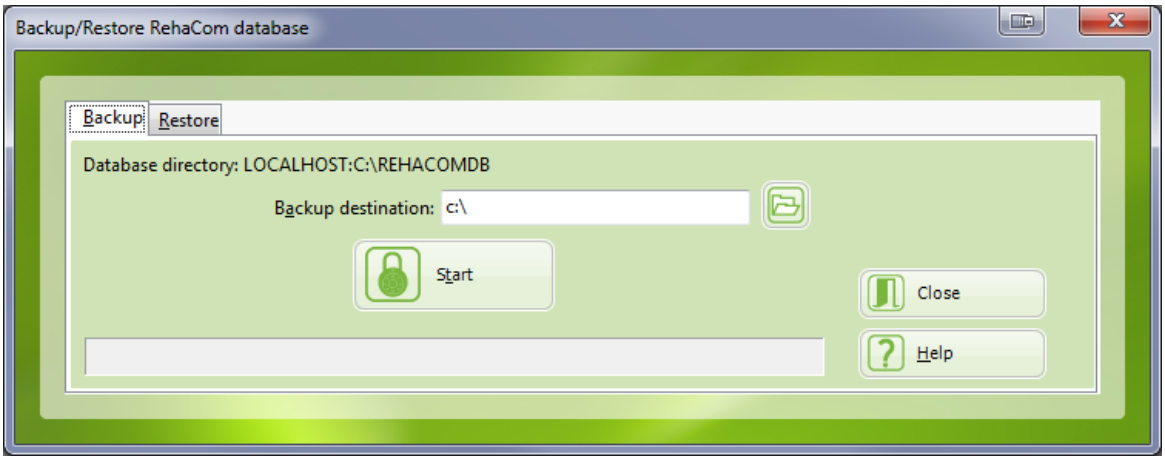
10.7 Backup/ Restore

All client data, parameters and process data are saved in a database. This database consists of some files saved in the directory c:\RehaComDB in standard installation (see Settings).

In regular intervals - at least once a week - a security copy of this database, a ***Backup***, is to be created. If the database is damaged (disk error, power failure in the moment of writing etc.) a ***Restore*** by means of the security copy is possible. Please remember that you can easily re-install RehaCom from the DVD in case of an error, but client data will be lost without the backup.



Window Backup/ Restore RehaCom database.

In the window Backup/ Restore RehaCom database there are two tabs:

- Backup for saving the database and
- Restore for a possible restoring of a defect database.

The Backup "copy" can be carried out onto a disk, or a second hard disk. Please do not use the hard disk on which the RehaCom database is saved. In case of a disk error a backup will be lost as well.

With the little explorer button you should select a disk or USB flash drive or network drive as backup destination. The backup commences with **Start.**

For Restore, the same procedure is applied.

Network database

Administrators should backup the RehaCom database every day.
A Firebird database should not be copied as database file (*.gdb or *.fdb). For Backup purposes, the Firebird programme GBAK.EXE must be applied.
All database files are located at directory "c:\RehaComDB" (by default).

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Use the **backup** command:
"C:\Program Files (x86)\Firebird\Firebird_2_0\bin\gbak.exe" -b -t -user sysdba -password masterkey c:\RehaComDB\REHACOMDB.GDB x:\BackupDir\REHACOMDB.FBK

This command saves database file *c:\RehaComDB\REHACOMDB.GDB* to backup file *x:\BackupDir\REHACOMDB.FBK*
When the database password **masterkey** was changed (see chapter Check database), the new password has to be applied.
The file REHACOMDB.GDB is most important, it changes on every RehaCom use. Changes in the other database files only appear in RehaCom updates or when installing and uninstalling therapy modules.

To **restore** the database use the command
"C:\Program Files (x86)\Firebird\Firebird_2_0\bin\gbak.exe" -r o -user sysdba -password masterkey x:\BackupDir\REHACOMDB.FBK c:\RehaComDB \REHACOMDB.GDB

Detailed information about Firebird backup can be found on http://www.firebirdsql.org/manual/gbak.html

10.8 Volume RehaCom

All RehaCom modules use acoustic feedback, sometimes with spoken instructions or typical sounds or signals.

The volume for the connected client headphones or loudspeakers can be adjusted with the Windows function **Volume**.

Click on the little loudspeaker in the task list at the bottom of the screen for this. A shift regulator appears, which moved up or down will adjust the volume.

In order to check the volume, press the button **Volume RehaCom**. The word "RehaCom" is to be heard. This way you can adjust the volume individually.

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10.9 Start Service

RehaCom was tested on a representative number of computers using different graphics and sound cards.
Nevertheless compatibility problems could occur with any software.

A detailed error analysis by the **RehaCom Service** can help. The service needs to pick out exactly the place where an error occurs. Therefore a small programme is started listing certain actions.
This listing is started in the window System parameter with the button **Start service**.
The window **RehaCom trace** appears, and the protocol is shown in this window.
Leave the window open and return to the place in the programme where the error occurred. Try to do the "same action" again. The trace window, still open in the background, receives and protocols everything happening.
After the error has occurred again, print or save the protocol (**File/ Print message list** or **File/ Save message list**). Send the messages to the RehaCom help desk for analysis.

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11 Quick Guides

11.1 Internet - first steps: Therapist

There are two ways of using RehaCom via Internet.

Option 1:

Patients can be supervised therapeutically via Internet by means of therapy prescriptions.
A detailed description of the training with therapy prescriptions can be found in the corresponding chapter in this manual.

Option 2:

Therapy modules can be licenced via Internet. More information about RehaCom-Licences can be found in this manual, in the corresponding chapter called Licences.

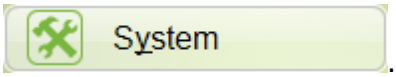
Both options can be used independently, but also simultaneously.

Therapy prescriptions (option 1):

To create therapy prescriptions, you have to be logged in as therapist.

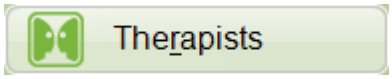
Please follow these steps:

Start **RehaCom**

In the main window click on the button 

. The **System-Parameter** window will appear.

Here you click the button USER-MODE. The **User-Mode** window will appear. You then select the option "**as therapist, with online-supervision**" and close both the windows "User Mode" and "System Parameters".

Click on the button 

in the RehaCom main window. The window "**Therapists-List**" appears.

Here you press the button "**New**" in order to enter a new therapist or on the button "**Edit**" in order to edit an existing therapist.

Please enter your data. Activate the option "**Register online**". Now all the

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mandatory input fields will obtain a green colour.

After clicking on **OK**, a window called "**data transfer**" appears briefly. Your data will be stored online.

As of now you can create therapy prescriptions for your patients and lodge these online for them. The patient also has to be registered online. For more information please read the chapter "Internet - first steps: User" in the manual.

11.2 Internet - first steps: User

There are two options to train online with RehaCom.

Option 1:

You are working alone, without therapeutic supervision

Option 2:

The training with RehaCom is being supervised by a therapist. The therapist determines which therapy modules are especially appropriate for you and controls your training through therapy prescriptions.

In any case, a supervised training is recommended. Adress yourself to your rehabilitation clinic, support group, your neuropsychologist or occupational therapist to gain more information about care options.

Training without supervision (option 1):

The use of the RehaCom-Software is made possible through time licences. Quite similar to a prepaid-card for a mobile phone, you purchase training time for RehaCom, which you consume during training.

The current level of the licence counter is always lodged online. Therefore you will need a connection with the Internet. Right before the start of your training, a connection to the RehaCom-Server will be established and the current level of your licence counter will be ascertained.

To train with RehaCom, follow these steps:

Start RehaCom

The first time RehaCom is started, a window called "**User Mode**" will appear. Choose the option "**as the client, without supervision**".

Then the window "licencing-mode" will appear. Here you have to choose the option "**licencing via Internet**".

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(In case you chose any wrong setting at the first start of RehaCom, you can always change the settings by clicking on the button "**System**" and then on the buttons "**User-Mode**" or "**Licencing-Mode**".

When starting RehaCom for the first time (empty data base), you will see the window "clients data". Later you can access the "**Client data**" window by clicking on the menu-button **"Client" -> "New..."** or **"Client" -> "Edit".**

In the window "**Client data**", click on the "**Address**" tab and enter your data. To purchase licences via Internet, you have to activate the option "**Register online**".
It is mandatory to enter data in all the green fields.
The tabs "**Payment", "Therapy modules" and "File"** can be ignored.
Enter all the necessary data in a correct way and confirm your entry by clicking on the "**OK**"-button.
The window "**Client data**" will close, a connection with the Internet will be established and you will be registered on the the RehaCom web server.

You can immediately start with the training since you will get a free training hour with your first registration.

If you want to purchase more therapy hours, press the button "**System**" and then the button "**Licences**". The "**Licence**" window appears, where you can check the current level of your licence counter.

By pressing the button "**Request an offer**", the "**Request an offer**" window appears.

Please enter your data and send us an email by pressing the button "**Send email**".

The Hasomed-Sales team will contact you as soon as possible.

Now you can start training with RehaCom. Select a therapy module in the "**Module**" area in the main window and start the training by clicking on the "**Start**" button.

Training with supervision (option 2):

If you decide to do a supervised training, the therapist will take care of all the data entries.
A specific client's version was made especially for clients. In this version, the following data is already predefined and you may continue reading at "**Login**".

You have to inform RehaCom once that you want to train in the supervised client's mode.

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The first time you start RehaCom, the window "**User-Mode**" appears. Here you select the option "**as the client, with supervision**". Then the window "**Licencing-Mode**" will appear. Here you select the option "**Licencing via Internet**".
(In case you chose any wrong setting at the first start of RehaCom, you can always change the settings by clicking on the "System" button and then by clicking on the "**User-Mode**" button or "**Licencing Mode**" button.

The first time you start RehaCom, the "**Client Data**" window will appear automatically. Please do not enter anything in this window. Close the window by clicking "**Cancel**" twice. Your data has already been entered by the therapist.
Ask your therapist about bearing the cost of the training. The licencing of the RehaCom training can either be achieved by means of the therapist or the client.
In case the training shall not be licenced by means of the therapist, still the therapist has to order licences on your behalf before you can start using RehaCom.

To start working with RehaCom, you have to switch to the "**Client mode**". Click on the "**System**" button, then on the "**Client mode**" button. RehaCom will then switch to the "**Client mode**".

Login:

From now on a window will appear when you start RehaCom, where you have to enter your name and your password.

The therapist will give you the necessary name and password. He has registered you online and also has lodged information regarding your training.
After entering your name and password, please click on the "**Login**" button. Your data will be loaded from the Internet and you will be able to start your training with RehaCom.
When you have finished your training, click on the "**Close**" button. Your training records will automatically be stored online, so that the therapist is able to observe the progress of your performance.

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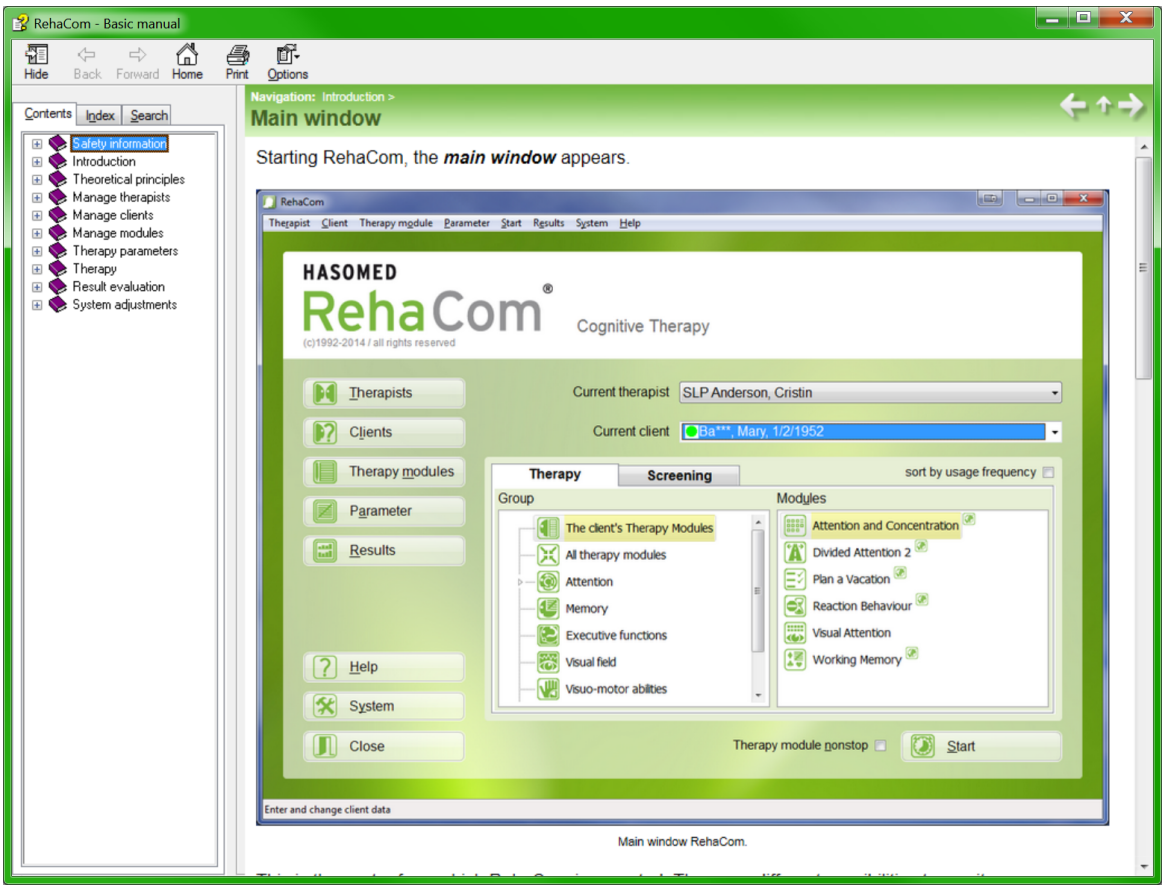
12 Help

12.1 Manual

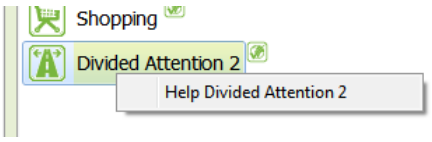
You can open the manual via "Help" -> "Index".

The help file of the RehaCom main window will open up subsequently.



Window "Help"

You can access the manuals for the specific modules via right click on the name of the module, or via "Help" button in the parameter menu.



Contextmenu module

Printable PDF versions can be found in the folder "Manuale" on the RehaCom DVD.

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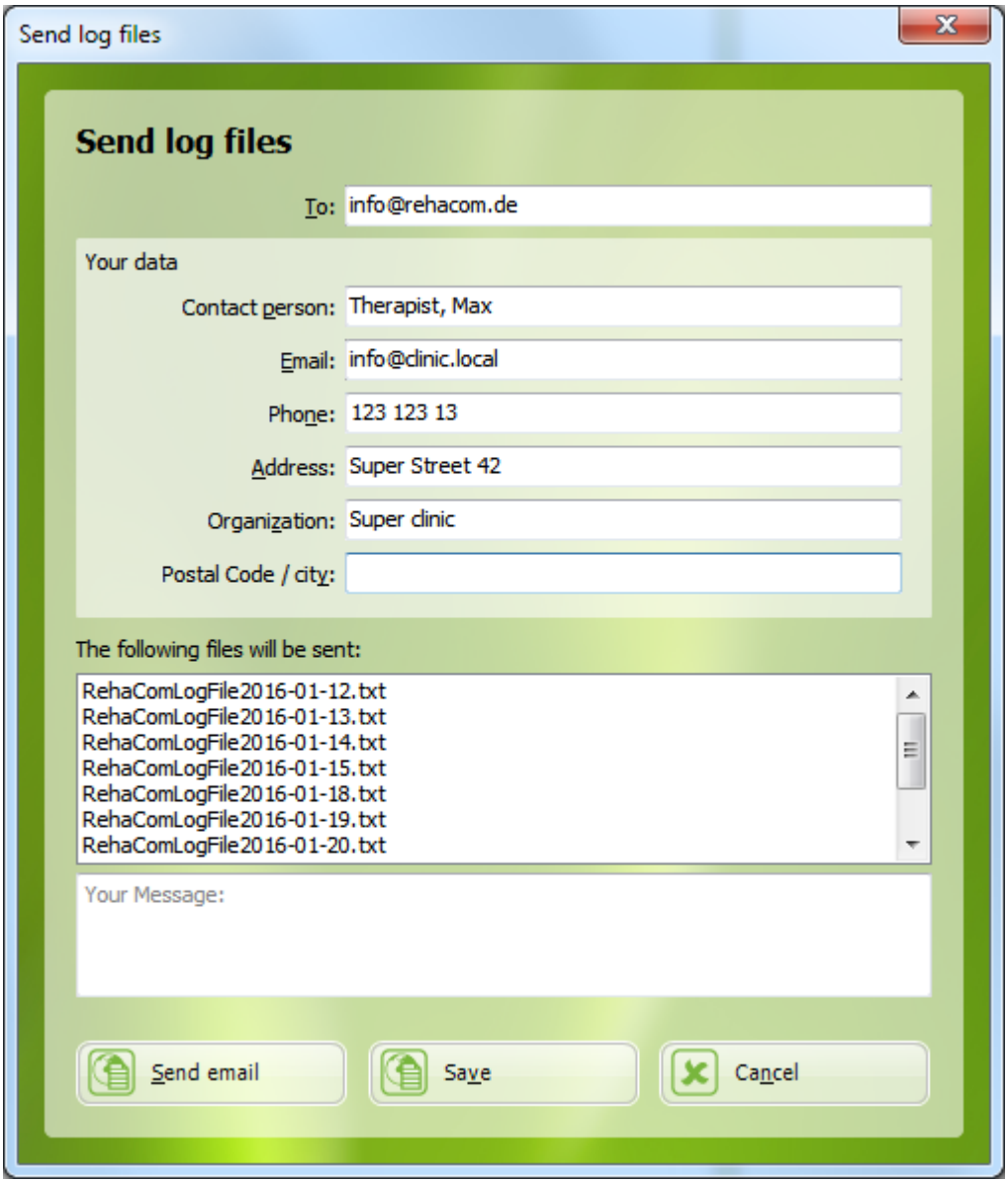
12.2 Send log files

RehaCom is capable of collecting debug information automatically. In case of an error or problem, this information can be sent to RehaCom support as additional source.

The debug files can be sent via "Send log files". A window containing your data and a list of debug files will be opened.



Window "Send log files"

As RehaCom fills this window automatically, please check whether your data is correct.

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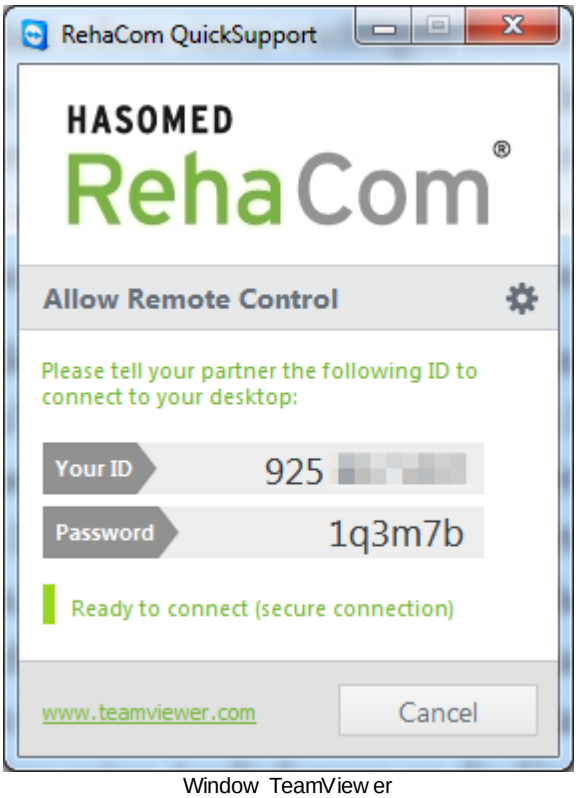
By pressing the button "Send email", you can send the log files to the email address displayed in the field "To:".
If it is not possible to send the file from your computer via Internet, please press the button "Save" to create a ZIP file on your desktop. Then you can use an USB flash drive to transfer this file to a computer where you can send email.

12.3 Start remote control

Sometimes, in case of problems concerning RehaCom, the support team will ask you to start the remote control software TeamViewer. This can be done via "Help" -> "Start remote control".

In some cases, Windows will ask you for permission to start this software. Please confirm!
Then, the following window will be displayed.



Window TeamViewer

Please, make sure that the green line "Ready to connect..." is visible and that there is no problem connecting to the internet.
Then tell your support contact the number behind "Your ID" as well as the password.

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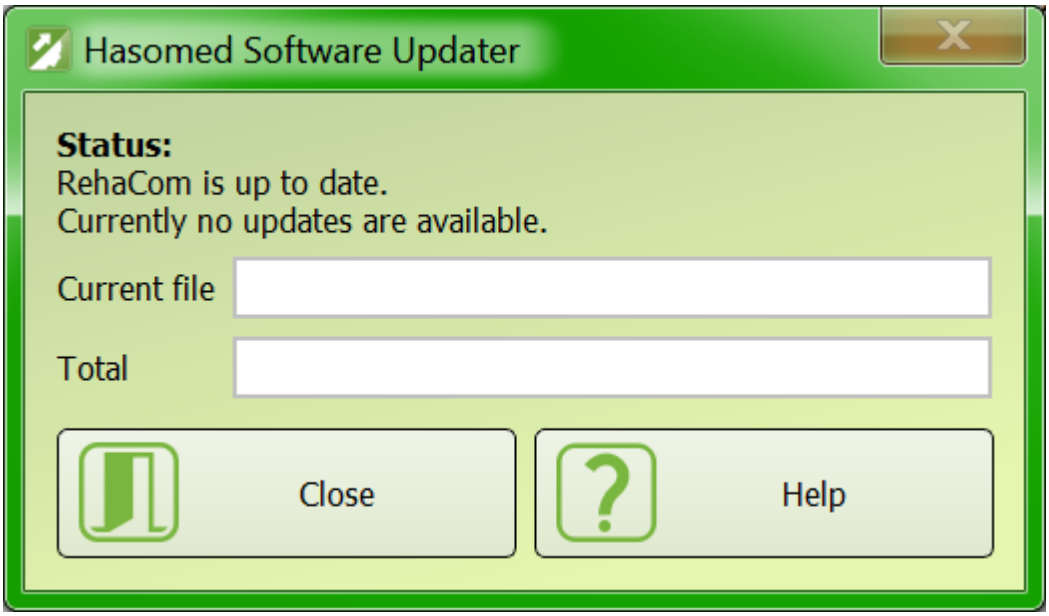
12.4 Update RehaCom

RehaCom is subjected to a continuous improvement process. RehaCom includes an update function to provide you with improved translations and bug fixes faster and easier. You can start the update function via "Help" -> "Update RehaCom". Windows may ask for administrative permission to update RehaCom. Please consent to the update function.



Window "Update RehaCom", no updates are available

The function will check for available updates regarding your RehaCom version using the internet. The update window will display an appropriate message if an update is available. You can update the RehaCom version on your computer by pressing the "Update"-Button. No update button will be present if your RehaCom version is up-to-date already.

We recommend to keep all RehaCom installations up-to-date if your are using RehaCom on several computers. This can be achieved by scheduling RehaCom updates on all computers in brief succession. The RehaCom update function will not offer any updates if an internet connection is unavailable on your computer. To update RehaCom without an internet connection, please contact your RehaCom distributor to receive the latest RehaCom installation medium.

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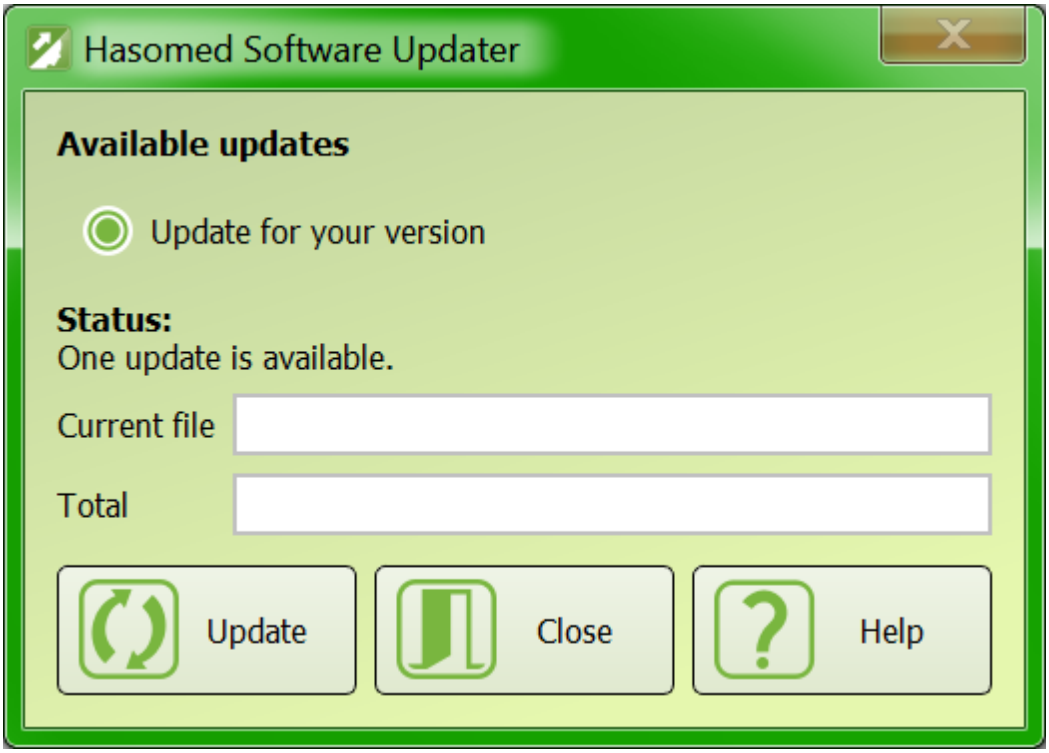

Window "Update RehaCom", one update is available

12.5 Info

A brief overview of the installed RehaCom version and the Firebird server used, can be found in the dialog box under "Help" -> "Info".

Window "Info"

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