DST8000 and DST8000 Pro

User Guide

Caution! **No one should be on the equipment while adjusting the stairs' height.**

In case of emergency, it is possible to lower the stairs while up to 3 people are on the DST in order to remove a patient.

<u>Admin initial login info</u>
username: a
password: 2222

Note:

- When using the DST8000 with **long handrails**, the device should be horizontally until patient reach stair number one. Then, the physiotherapist can raise the stairs to the appropriate height.
- Warranty: to activate your warranty fill the online warranty form at:
  www.dpemed.com/dst-registration

Contents

1. Introduction

Dear Physiotherapist,

Stair climbing and walking on a flat surface up and down hill are basic everyday skills. The sooner patients can achieve independence while walking and stair climbing, the sooner they can return to normal life.

The revolutionary **DST8000 Pro** was developed in close cooperation with leading physiotherapists. It combines two devices in one, including an adjustable staircase for walking up and down steps, and a full horizontal parallel bar.

With a click of a button, you can adjust the height of the stairs. Patients benefit from an optimal training regimen, leading to improved performance in less time and effort.

The **DST8000 Pro** features friendly software and user interface to manage and monitor treatments. It displays data from previous sessions to enable easy tracking of patient progress. Clear and objective progress charts can be quickly generated for all training parameters. Treatment data can be downloaded or sent via email.

Thank you for choosing to incorporate our product into your clinic and rehabilitation program. We trust that it will help you provide high quality and successful patient care.

Intended purpose: practicing walking on flat surface, and climbing stairs from 0-16.5 cm.

Intended users: patients undergoing physical therapy, at the professional discretion of a physiotherapist.

2. Precautions and Safety Instructions

- The DST is to be used only under the supervision of an authorized physiotherapist.

- Take extra care if there are children in the surroundings.

- Do not place the DST near a window that may interfere with its movement.

- Ceiling height: Make sure that when the DST is fully elevated, the patient's head does not reach the ceiling when standing on the top stair.

- Do not expose the DST to rain or moisture.

- Do not use the DST where water spills can occur.

- Do not use the DST when you or the patient are wet.

- Do not place the DST near a heating source.

- Do not allow anything to rest on the power cord or leave any cords hanging where people frequently walk.

- Before operating the DST make sure no objects or people will interfere with its vertical movement.

- Do not allow more than two people on the DST

- No one should be on the device while adjusting the stair height.

- Unplug the DST before cleaning it.

- Do not attempt to service the DST yourself. If the DST does not operate, please refer to section "Troubleshooting".

- Unplug the DST and contact your authorized representative if one or more of the following occurs: The power cord or plug is damaged; The DST has been exposed to water; The DST has been damaged; The DST does not operate normally; Unusual noises are heard.

- Disinfection: to maintain patient's hygiene, you can disinfect the handrails of the device before usage.

- In case a serious incident occurs in relation to the device, please report immediately to DPE Medical and the relevant competent authority in your country.
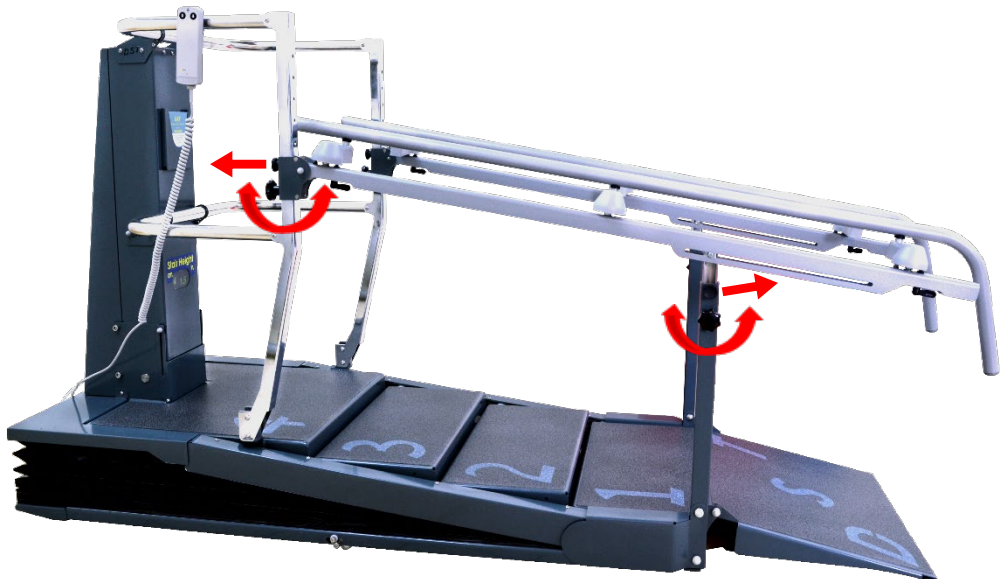
3. Adjusting the Device

3.1 General

1. Plug the power cord into a grounded wall outlet.

2. Make sure no objects or people will interfere with the DST's up/down movement.

3. First make sure the handrail height suits the patient and only then adjust the stair height.

3.2 Adjusting the handrail height

1. Lower the DST to the lowest (horizontal) position.

2. Turn the handle counterclockwise.

3. Pull the indexing plunger.

4. Adjust the handrail height and release the indexing plunger into the desired hole.

5. Tighten the handle by turning it clockwise.

3.3 Adjusting the handles' width (if applicable):

1. Lower the DST to the lowest (horizontal) position.

2. Turn the two handles to point towards the back of the DST (A). Adjust the width with both hands to the next "click" position.

3. Turn the two handles to point to the front of the DST.
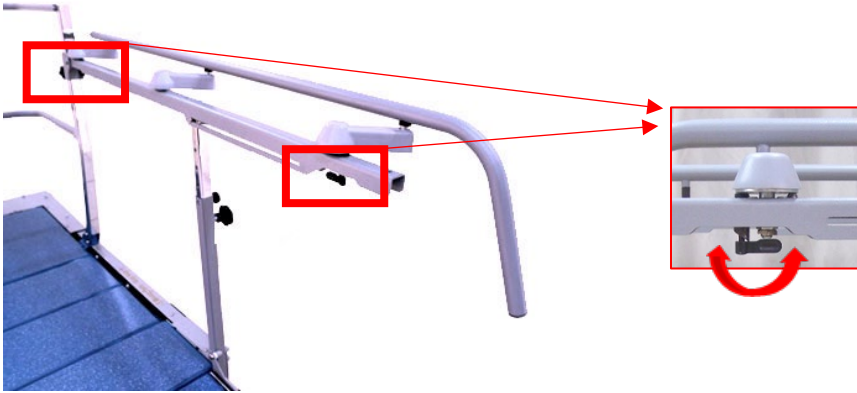
3.4 Using the RSR/CSRC (if applicable):

1. Move the shown handle forward/backward to change the position from STAIRS to RAMP, and vice versa.
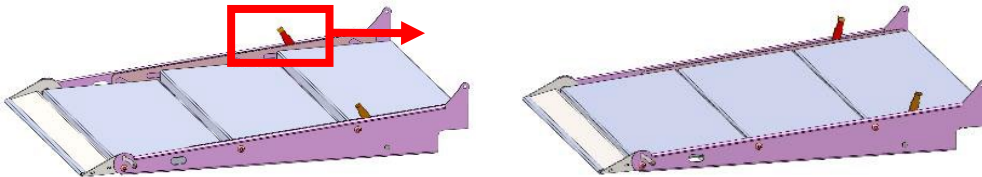
2. CSRC - to create a longer horizontal walking surface: take the handle (C), insert its hook into the slot (D) and lift until the front flap (E) is vertical and then lower the slope back. Put the handle back in place.

3. To change back to slope/stair options: Take the handle (C), insert its hook into the slot (D), lift the CSRC while pushing the flap (E) forward with your leg and then lower.


(D)   (C)   (E)
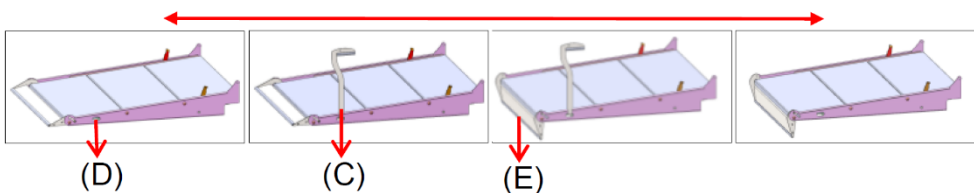
3.5 Adjusting Stairs' Height

1. Press and hold the up/down button on the hand-control until the desired stair height is achieved.

2. Monitor the height of the stairs by watching the scale located on the central column (centimeters are on the left, while inches are on the right).

3. Maximum stair height is 16.5 centimeters (6.5 inches). You can also monitor the changes on your screen when the software is used.

Up   Down

3.6 Moving the *DST* in the room
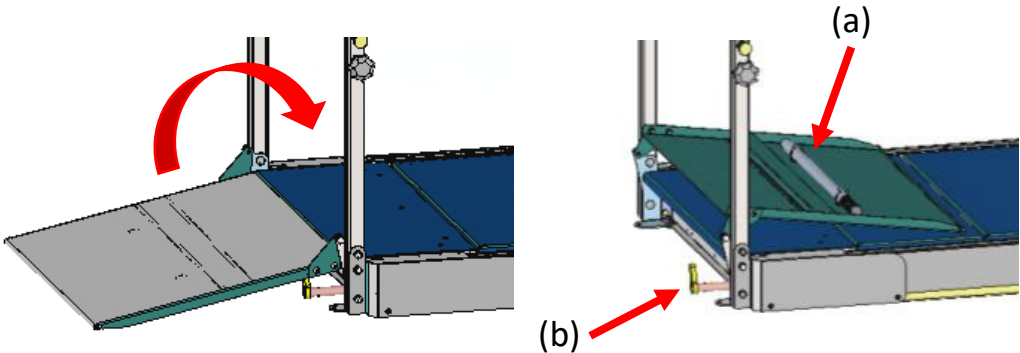
The DST is equipped with two sets of retractable wheels for easy moving – (1) under the first stair and (2) in the back of the device.
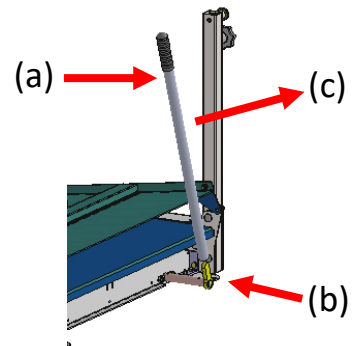

(2)   (1)
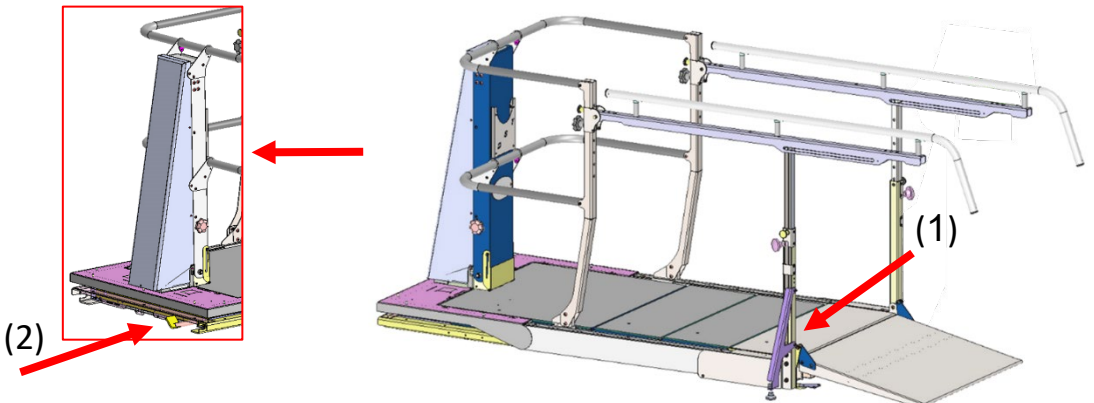
To move the DST follow these steps:

1. Lower the DST to the flat position. Unplug it and fold the front ramp.

(a)

(b)

2. Take the handle (a), insert it into the pin (b) and rotate 1/4 of a turn clockwise (c). Repeat on the back part of the DST. Now the DST is on wheels and can be moved easily.

3. After positioning the DST in its new location, repeat the same steps in reverse order and put the handle back in its place (under the ramp).

(a) (c)

(b)

4. Unfold the front ramp and connect the main plug to a grounded wall outlet.

4. Using the Software (applicable only for the DST8000 Pro)

4.1 Pro system features

- Displays information about patient's previous sessions in graph form before every session.

- Shows your patient's past progress and current status.

- Tells you how long it takes your patients to climb up and down stairs of different heights.

- Tracks and records all your patient's stair climbing treatment sessions.

- Generates patient's Progress Chart. Data can be shared and presented at professional meetings.

4.2 Operating the Computer/Tablet

4.2.1 **Screen setting** - after 20 minutes without use, the display will disappear and the sentence: Tap to Start will show on the screen. The software will shut off automatically after 5 hours without use.

4.2.2 **Rotate the screen** - you can rotate the screen. See the red arrows.
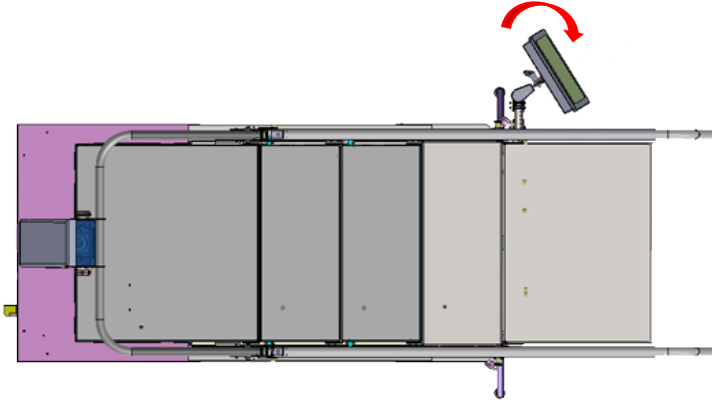
4.2.3 **Changing the angle of the screen** - loosen the lever (a) and adjust the angle of the screen (b). Tighten the lever (a).
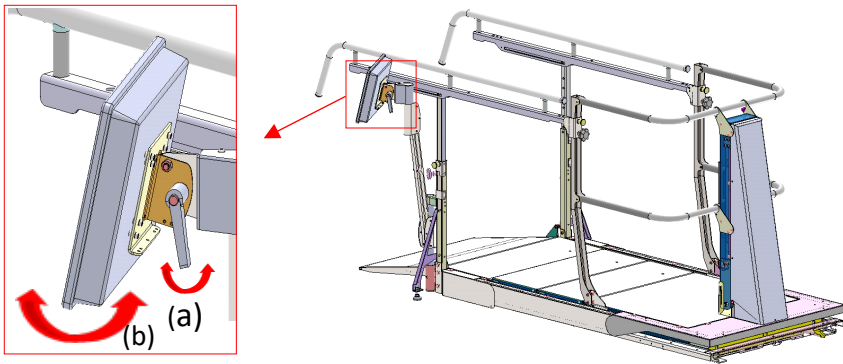
4.2.4 **Turning the Screen On/Off** - the on/off switch (c) is located at the bottom of the screen on the right. Press once to turn the screen on or off.

4.2.5 **Inserting a Disk-on-Key** (for downloading data) - The ports (D/E) for inserting DoK are located at the bottom of the screen on the left (d).
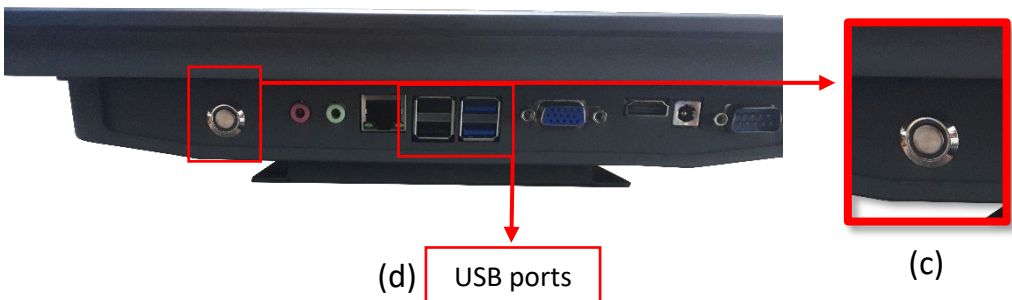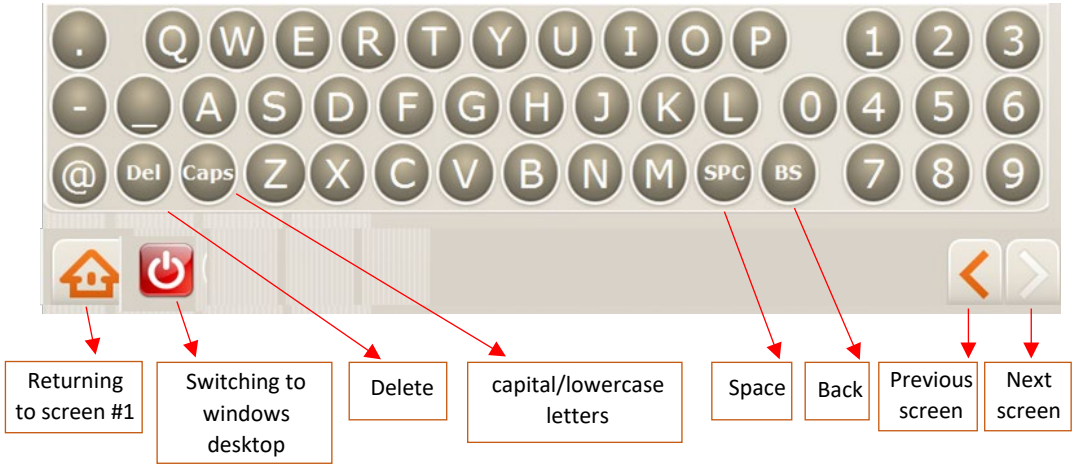
4.2.6 **Using the on-Screen Keyboard**

| Returning to screen #1 | Switching to windows desktop | Delete | capital/lowercase letters | Space | Back | Previous screen | Next screen |

4.2.7 **Connecting to Wi-Fi** - a wi-fi connection is needed for sending data outside the system and is essential for online support. Exit the software to windows Desktop. Press the icon "Network and Sharing…" and select "Connect or disconnect". Select your preferred Wi-Fi connection. If a password is needed, press "On-Screen Keyboard" to enter a password. After establishing a Wi-Fi connection, press the DST Sense icon to log-in.

See "More information" if no Wi-Fi connection is available.

4.3 Getting Started

The first login and initial setup should be done by the Administrator (such as the department head). See Section A - Initial Setup and Admin Options.

If initial setup has already been completed by the "Admin", continue to Section B - Physiotherapist User Guide.

Important: Because the height sensor of the DST is very sensitive the figures after the decimal point may flicker. This is normal and does not affect the DST or the software performance.

4.4 Section A - Initial Setup and Admin Options
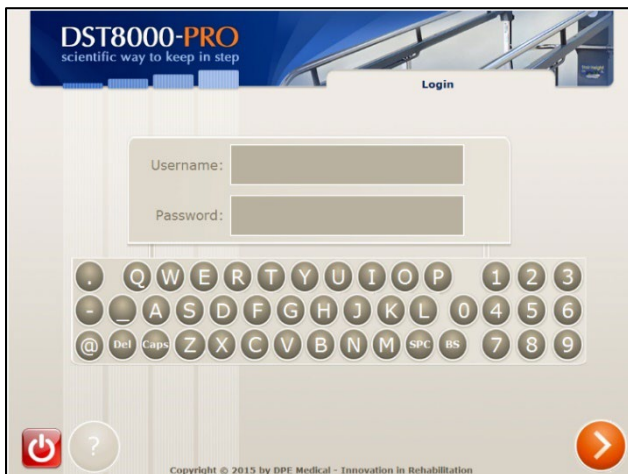
A-1 Login

Enter Admin initial login info:
username: a
password: 2222

Before using the system for the first time, the head of the department ("Admin") must complete the initial setup.

A-2 Admin Homepage

Press: "Edit institute data".
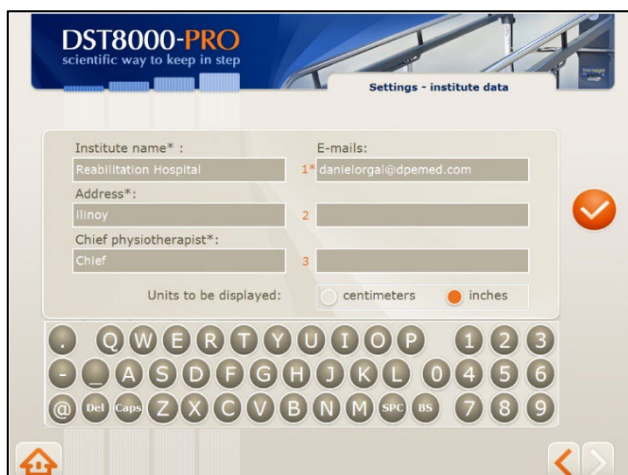
A-3 Institute Information

- Enter institute data and confirm.

- Fields marked (*) must be filled.

- Patient's Progress Chart will be sent to the email addresses you list here.

- Choose measurement units for stair's height – cm or inches.

- Data can be edit at any time.

A-4 Admin Homepage

Press: "Edit physiotherapists and patients".

A-5 Edit PTs and Patients

- During initial setup you must enter the names of the physiotherapists who will have access to the system.

- Press "Add Physiotherapist" and continue to A-6

- Additional options are available for the Admin on this screen. See
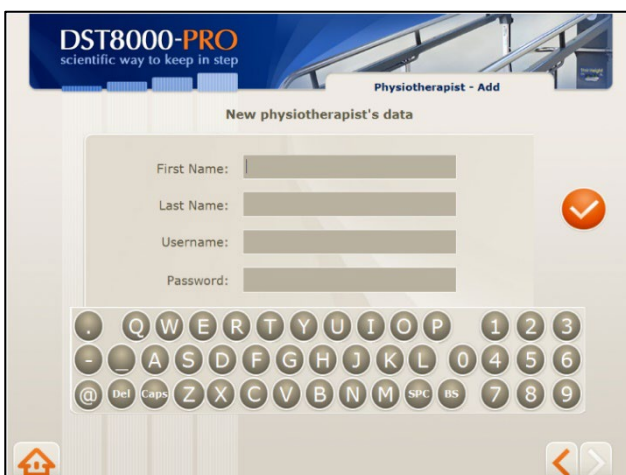
A-6 Add New PT

- Enter physiotherapists that will have access to the system and assign them a username and password. Press ✓

- If you will be treating patients, add yourself as physiotherapist with new login info.

- Data can be edited at any time.

- Inform your colleagues about

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A-7 Admin Homepage

Press: "Change password".
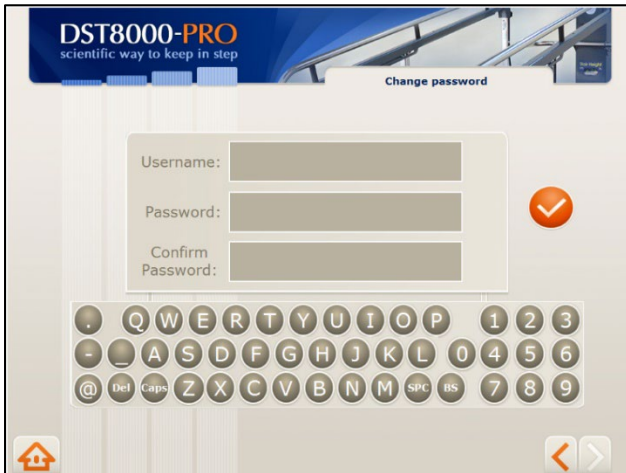
A-8 Change Admin Password

- It is recommended to change your login info from the initial info we provided.

- Enter new Password and confirm.

- Make sure you remember your new login info.

- See "Support" if you forgot your login info.

A-9 Calibration

- Press "Calibration".

- Calibration is very rarely needed. The need of calibration can occur after displacing the *DST* or after service.

- If the height of the stairs, as shown at the Progress Chart, is different from the height shown at the front window, calibration may be needed.

Calibration

- Lower the DST to its flat position and press as instructed.
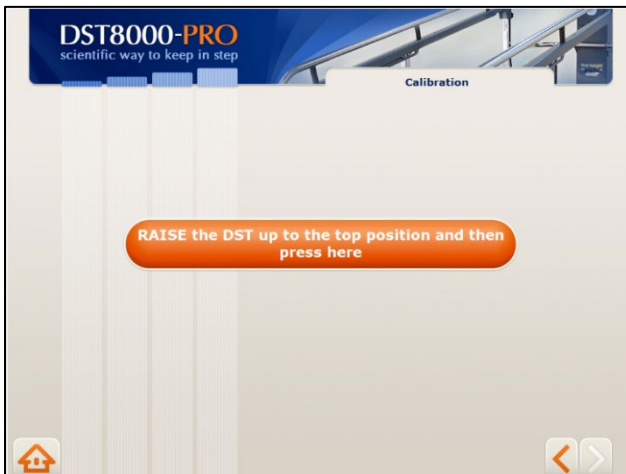
Calibration

- Raise the DST to its top position and press as instructed.

A-10 Admin Homepage

You have completed the initial setup and the system is ready for physiotherapists to start sessions.

- For download info see **A-11**.

- For additional Admin option see **A-12**.

- To view PT options, go to section **B**.

A-11 Downloading data

- To download patients' Progress Chart: after pressing "Download". select the appropriate drive (D or E) and confirm.

- A new library called: **ProgressCharts** will be created at your DoK and all Progress Charts will be saved there.

A-12 More Admin options

- **Change patient's PT:** Drag and drop the patient's name from one physiotherapist to another.

- **Display patient's Progress Chart:** Tap twice on patient's name.

- **Change PT's data:** Tap twice on physiotherapist's info (name, username, and password) and

- **To delete a PT:** Reassign PT's patients to other physiotherapists (see above "To change patient's physiotherapist") then press "Delete physiotherapist". A list of physiotherapists will be opened. Choose the name of the physiotherapist to delete and confirm. If this physiotherapist has patients, and you did not reassign them earlier, you will be asked to do so now.

- **Remember:** if you want to treat patients yourself, add yourself as a physiotherapist as well.

- It is recommended to prepare in advance a list of physiotherapists, their usernames and 4 digits passwords, before entering them at **A-6.**

- If, after using the system for some time, you have questions, ideas, or requests,

4.5 Section B – Physiotherapist Options

B-1 Login

- Enter Username and Password received from your Admin and press ❯.

B-2 PT Homepage

- Press "Add a patient" to add a new patient and continue to **B-3.**

  Or

- Press "Choose a patient" for an existing patient and continue to **B-5.**

B-3 Add Patients

- To add a new patient, enter patient's data and press ✅.

B-4 PT Homepage

Press "Choose a patient" for an existing patient and continue to **B-5**.

B-5 Patients' List

- Select a patient by pressing on his/her name and then press ⟩

- For your convenience, a list of your patients is displayed on the left, as well as a general list of all other patietns.

- Names are listed in alphabetical order.

- You can scroll up/down or enter

B-6 Patient's Options

- If you select "Start new session" continue to **B-7.**

- If you select "Edit patient data" continue to **B-8.**

- If you select "Delete patient data" continue to B-9.

Patient's first session - Progress Chart is empty

B-7 Patient's Progress Chart

- If previous sessions are available, they will be displayed on the chart.

- If this is the first session, the chart will be empty.

- To document a treatment session press "Start" before the patient steps on the first stair.

- After the patient practice the stairs, his/her performance will be displayed on the chart.

Patient's Progress Chart after several sessions

- You must press "**Start**" whenever you want to record the treatment session.

- Press "**Stop**" to reset if the patient did not complete the practice.

B-8 Edit Patient's Data

- Edit patient's data and press ✅

Deleting a patient from the system will not delete their Progress Chart

4.6 What is the DSF-Factor?

The DST-Factor is a score, generated by the software, which provides an accurate information regarding patient's current stairs' negotiation ability, together with a forecast of her/his improvement potential.

The DST-Factor is designated as follows: X-Y, where X is a number between 0 to 16 (0 to 6.5 where inches are used) and Y is a letter (A, B or C). The number represents the most recent stair height the patient climbed, and the letter represents the rate of progress: A - the patient has made significant progress; B - the patient has made moderate progress; C - the patient has not made any progress in the last 5 sessions.

The DST-Factor is calculated based on the last five sessions and is therefore shown only after 5 sessions have been completed. For example - **13-A** - patient mounted stairs of 13 cm and likely to further improve.

How the DST-Factor is calculated:

ΔH - The change in cm/inches between the current stair height and the height the patient climbed in the last five sessions.

ΔT - The change in seconds between the time it took the patient to climb the stairs in the current session, and the time in the last 5 sessions.

If $\Delta H > 2$ cm (0.8 in)	Then DST Factor is:	(current height)-A
Patient made significant improvement in stairs' height		
If $0 < \Delta H \leq 2$cm (0.8 in)	Then DST Factor is:	(current height)-B
Patient made mild improvement in stairs' height		
If $\Delta H = 0$ and $\Delta T < 0$	Then DST Factor is:	(current height)-B
Patient made no improvement in stairs' height, but did improved practice time		
If $0 \geq \Delta H$	Then DST Factor is:	(current height)-C
Patient made no improvement.		

4.7 Progress Chart Display

Time it took the patient to climb up the stairs in past sessions.

Time it took the patient to climb down the stairs in past sessions.

Stairs' height

Name of patient

Name of physiotherapist

DST8000-PRO
scientific way to keep in step

Personal Chart : asaf argas

| 2 | 4 | 2 | 3 | 2 | 2 | 2 | | Up (Seconds) |
| 1 | 3 | 1 | 1 | 2 | 3 | 2 | | Down (Seconds) |

Physiotherapist
daniel orgal

Height
6.6

Time Up/Down
0 0

DST-Factor
7 - A

Start **Stop**

Date 2016

18/5 18/5 18/5 18/5 18/5 18/5 18/5

Send Progress Chart

Date of session

Back to screen #1

Progress graph

Back to patient list

Stop/Start buttons

Current stairs' ascent/descent time

DST-Factor

4.8 Additional information:

- Patients' information generated by the *DST* is confidential. Use discretion and follow your organization's procedures for maintaining confidentiality of patient records and documents.

- Use of the software is the sole responsibility of the user.

- The aim of the DST-Factor is to provide a score that represents the patient's current stair climbing abilities. However, it does not override or replace your professional judgment.

- If Wi-Fi connection is not available, you can connect the computer/tablet to the network using an internet cable or a net-stick. Consult your network technician.

- The DST can be used without the software.

- Minor visual variances can be between this guide and the displays on screen.

- It is recommended that physiotherapists enter their patients' details into the system in advance, and not before a session.

5. Support:

- If you encounter a problem using the software, try turning the screen off and on.

- If the Admin loses the Password/Username, please contact DPE Medical: info@dpemed.com for new login info.

- If the problem persists, send email to info@dpemed.com with a description of the problem, your name, email address, phone number and your institute's name and address. We will diagnose and fix the problem remotely and update you.

- Before cleaning, unplug the DST from the wall outlet. The outer surfaces of the DST may be cleaned with a dry cloth.

- When service is required, or if you have any questions, please contact your distributor.

- You are more than welcome to contact the manufacturer with comments, questions, or requests:

- For remote support Wi-Fi connection is needed and the computer/tablet must be turned on.

6. Troubleshooting

Should the *DST* fail to operate properly please check that:

- The power cord is plugged into the wall outlet.

- The wall outlet has power. Check by plugging another electrical appliance into the outlet.

- The *DST* may be overloaded with excess weight. Clear the *DST* of all users and try again after 3 hours.

If the *DST* still fails to operate after trying all of the above, unplug the cord and contact your authorized *DST* representative.

7. Technical Specifications

Weight:	**DST8000:** 250Kg (550 lbs)
	DST8000 Pro: 265 kg (617 lbs)
Stair width (regular):	74 cm (29 inches)
Stair height range:	0-16.5 cm (0-6.5 inches)
Capacity (static):	300 Kg (660 lbs)
Electrical requirements	100-240V, 50/60Hz, 4A max
Operating interval:	2 min on / 18 min off
Regulatory compliance:	IEC 601-1 CE, UL (motor, controls)
Device Width:	90 cm./35.5 in.
Device Length:	with regular slope: 250 cm./98.5 in.
	with RSR: 280 cm./110 in.
	with LHR: 310 cm./122 in
Self-life	10 years
Storage conditions:	Temperature: 10° to 40°C (50°-104°F)
	Humidity: 30% to 85% non-condensing

Pro System

Scan the code to see a short video guide on how to set-up and use the Pro system.

DST Community

Check out the DST Community - a FREE video library with dozens of ideas and tips for balance and gait rehabilitation exercises.

The DST models are developed and manufactured by:
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Tel: +972-2-5791177; Fax: +972-2-5791188
info@dpemed.com ; www.dpemed.com

Medical Device

$C\epsilon$ |MD| ISO

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DPE Medical ltd.   **Innovation In Rehabilitation**