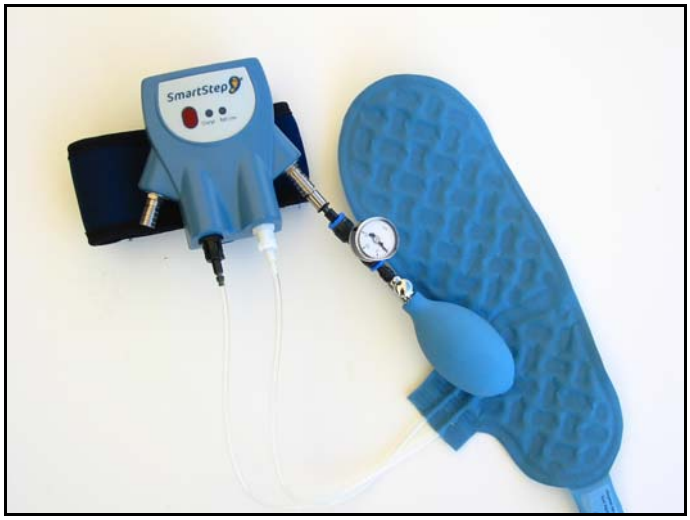
4 Preparing a Session

4.1 Check Air Pressure - Inflate the Insole if Necessary

The insole needs to be inflated before the first session with each patient. The exact pressure is unimportant at this time, it is merely necessary in order to place the insole inside the shoe. Check that the insole is inflated. If not, connect it to the Control Unit (see section 4.6 below) and inflate the insole's air pockets - the process is detailed below.



Insole, Control Unit and Air Pump

➔ To inflate the insole:

There are two metal tube sockets, located on each side of the Control Unit.

1. Insert the pump into one socket. Inflate the air pocket. Once the air pocket is inflated, remove the pump from the socket by pulling the grooved tube upwards.
2. Repeat the above process for the other socket.
3. Disconnect the insole from the Control Unit.

To disconnect the insole from the Control Unit, twist the connectors counter-clockwise.

4.2 Remove the patient's shoe

Remove the patient's shoe keeping in mind the following precautions:

- SmartStep™ works only with sports shoes.
- Patient must wear socks.
- Please note that shoe sizes vary according to manufacturers.
- The insole must correspond to the size of the patient's sports shoe.
- The insole is personal. Do not transfer it from patient to patient.

4.3 Insert the inflated insole into the shoe

Only one leg at a time undergoes assessment or training. The insole can fit either foot.

➔ To insert the insole:

Use a sports shoe matching the patient's leg (left or right). Insert the insole into the workout shoe ensuring a snug fit, do not remove the original inner insole. The tubes of the insole should be on the inside (medial side) of the patient's leg (i.e. on the patient's left for a right-foot shoe, or on the patient's right for a left-foot shoe). If the tubes are on the other side, turn the insole over.

The insole must fit the shoe properly and smoothly cover the entire inner sole area of the shoe. If the insole does not fit, try a different size.

SmartStep™ Insole Size (EU)*	**SmartStep™ Insole Size (USA)***
37-38	6-7
39-40	7.5-8
41-42	8.5-10
43-44	10.5-11.5
45-46	12-13

* Not all insole sizes are currently available. See section **Error! Reference source not found.**.

4.4 Put the patient's shoe back on

Use the insole's extension strip (located at the heel of the insole) as if it were a shoe horn to prevent the insole from sliding forward. Ask the patient to take a few steps in order to properly locate the insole inside the shoe.

The patient should feel comfortable when walking and exercising with the insole.

4.5 Attach the Control Unit to the ankle

Attach the Control Unit, using the strap, above the patient's lateral malleolus (ankle). The Control Unit should be on the outside of the leg (i.e. on the patient's right for a right foot, or on the patient's left for a left foot). The display should face outwards so that you can see its readings.

The ankle strap should not touch the patient's skin. Keep the patient's sock or trouser between the skin and the Control Unit.

4.6 Connect the insole to the Control Unit

Control Unit and Insole Connection

1. Connect the insole tubes to the Control Unit by pressing the connectors together and twisting clockwise.
2. Connect the black connectors together for the hind foot and the white connectors for the forefoot.

4.7 Inserting the Bluetooth USB Adapter

Insert the Bluetooth USB adapter into the computer, if it has not yet been inserted.

- The Bluetooth icon at the bottom right of the screen is red before the Bluetooth USB adapter is inserted.
- The Bluetooth icon turns white after Bluetooth USB Adapter insertion.
- Make sure the adapter is unobstructed and able to broadcast to the Control Unit. If the adapter is obstructed it is recommended to use a USB extension cord.

For online exercises the adapter broadcast range is about 7 meter radius. It is recommended to work inside one room.

4.8 Turn On the Control Unit

- Press the Operation button on top of the Control Unit twice.
- The Control Unit display is **0**.

4.9 Launching the SmartStep™ Software

1. Launch the SmartStep™ software by double-clicking on the desktop shortcut icon

Or by clicking on the SmartStep shortcut in the Start->Program Files->SmartStep program group.

2. The Login dialog box opens.

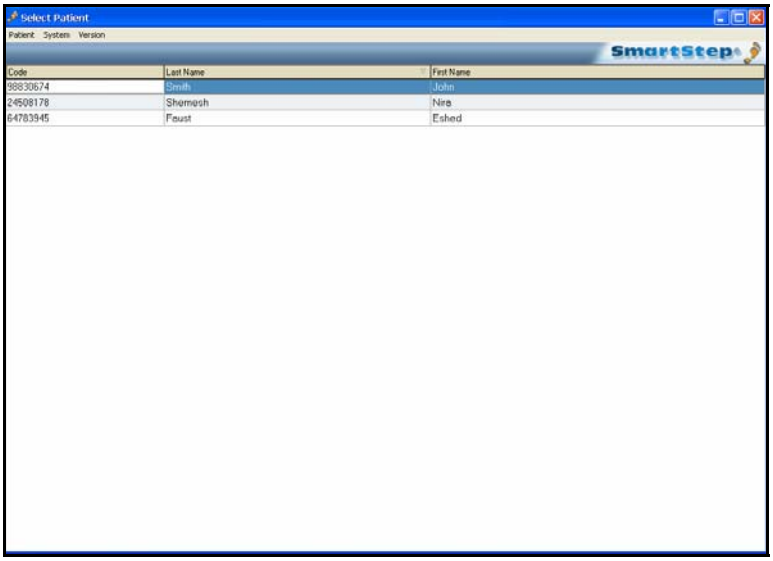
3. Select your **User Name** from the drop-down menu and type your **Password** in the edit box.

4. Click the **OK** button to log in.

5 Starting a Session

5.1 Patient File

The software starts with a screen listing all past patients.

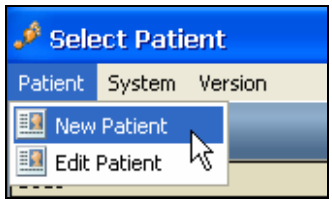


5.1.1 Creating a New Patient File

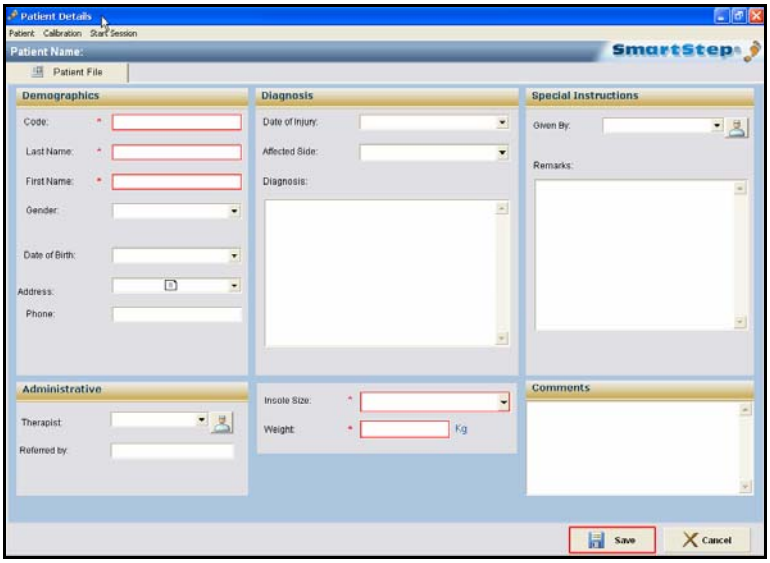
For the first session with a new patient, you need to create a patient file. The patient file holds all administrative data about the patient, as well as historical records of all the patient's sessions.

➔ **To create a new patient file:**

1. In the **Select Patient** screen, click the **Patient** menu, select the **New Patient** option.



2. The **Patient Details** dialog box opens.



3. Fill in the patient's personal and medical details. The following fields, marked with an asterisk (*) in the dialog box, are mandatory:

   - **Code**, a unique reference number.
   - **Last Name**
   - **First Name**
   - **Insole Size**
   - **Weight**

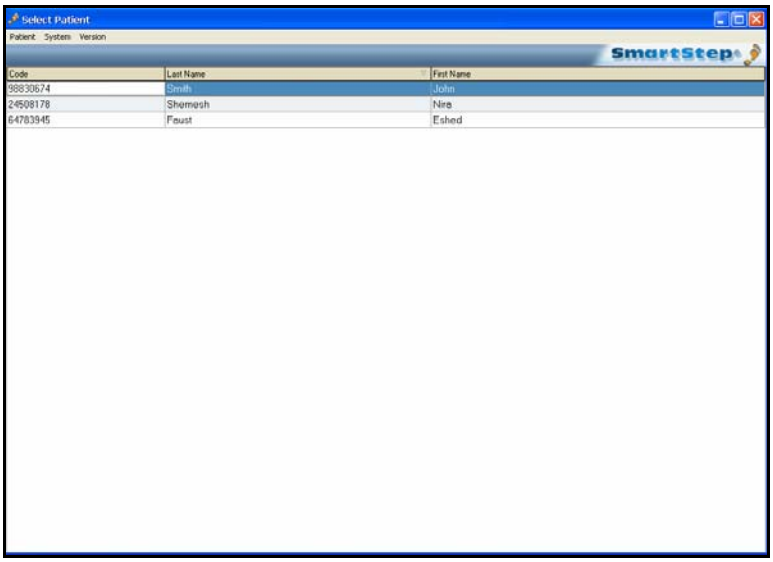
4. Click the **Save** button to save the patient's details and create a patient file.

   A dialog box opens to confirm the action.

5. Click the **OK** button to continue.

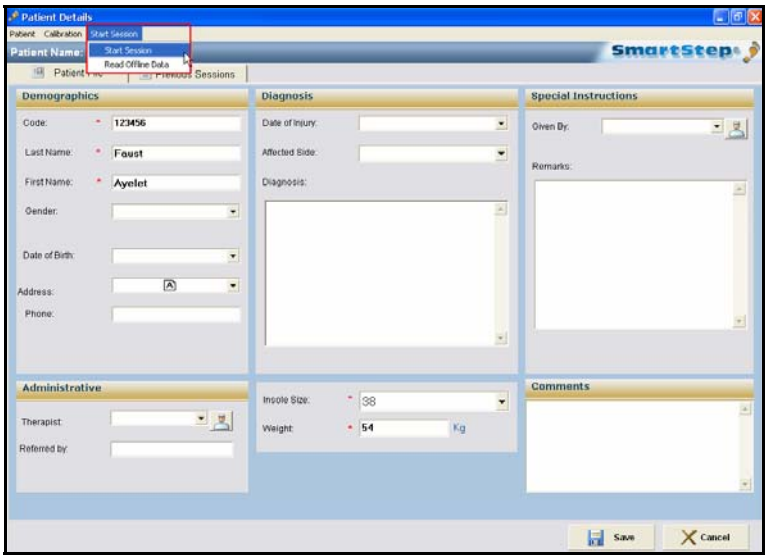
5.1.2 Opening an Existing Patient File

To choose an existing patient, double-click the patient's line. The patient file opens, with all previous data recorded.



5.2 Starting a Session

Select **Start Session** in the **Start Session** drop-down menu.

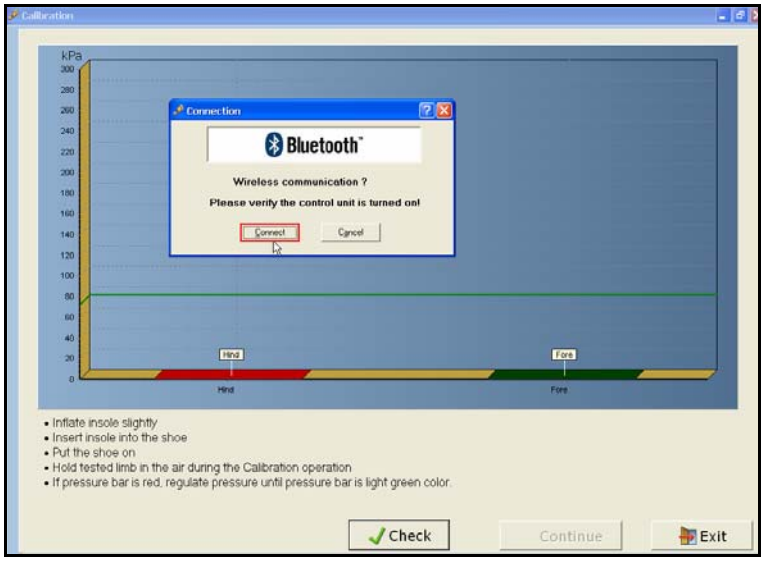


In the first session you have to go through the **Connect to Bluetooth** screen and the **Calibration** screen.

5.3 Connecting to the Bluetooth USB Adapter

This procedure assumes that a Bluetooth USB adapter software is already installed on the computer. For detailed installation instructions please refer to section **Error! Reference source not found.** and **Error! Reference source not found.**.

1. Click **Connect** in the **Bluetooth Connection** dialog box.

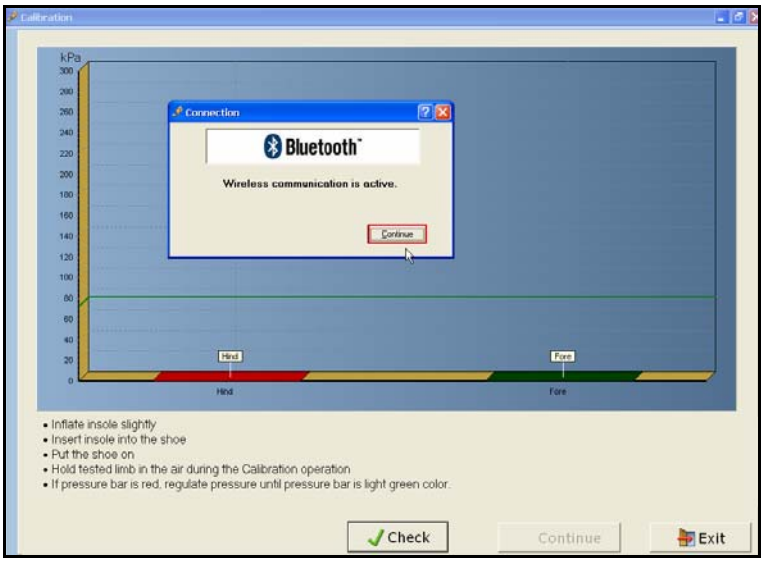


2. The Control Unit beeps twice to indicate that the connection has taken place. The Bluetooth icon at the bottom of the screen turns green.

3. If the system fails to connect a dialog box allows the user to **Try Again**.

If the connection fails, at any point during the session, the Control Unit emits four beeps and the dialog box allows the user to reconnect.

4. Click Continue in the **Bluetooth Connection** dialog box.



5.4 Performing Calibration

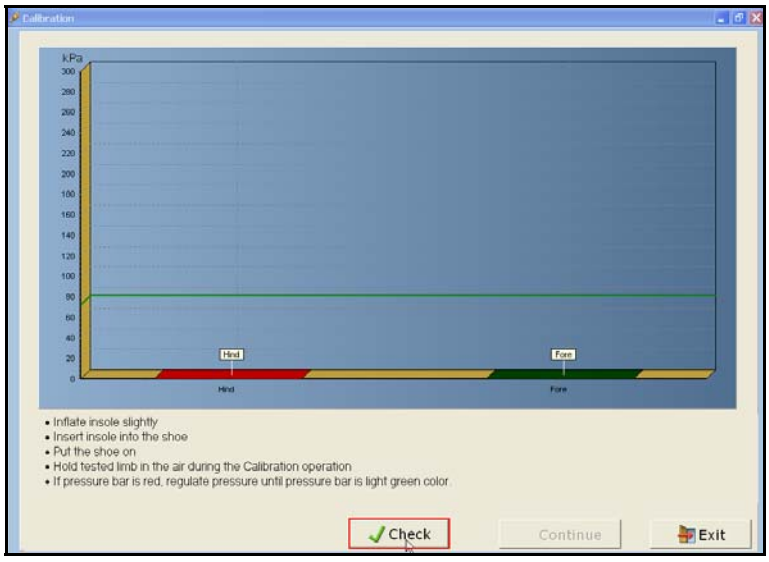
At the beginning of each session, SmartStep™ must take a baseline pressure reading, while the patient is holding his foot in the air. This is called *Calibration*. When the patient steps on the foot during the session, the force exerted is compared to this baseline pressure.

The desktop software checks the air pressure in the insole before the pressure reading is calibrated. If the pressure is incorrect, the software alerts you and the insole must be inflated or deflated.

The Calibration window opens automatically once a session is started for a new patient. It is also possible to begin calibration manually if the user wants to check and correct the calibration process, by clicking the **Calibration** button left of the **Start Session** button.

To calibrate the system:

The patient must sit with the treated leg folded over the other leg (or supported by any other means) in order to avoid any contact of the foot with hard surfaces throughout this procedure.



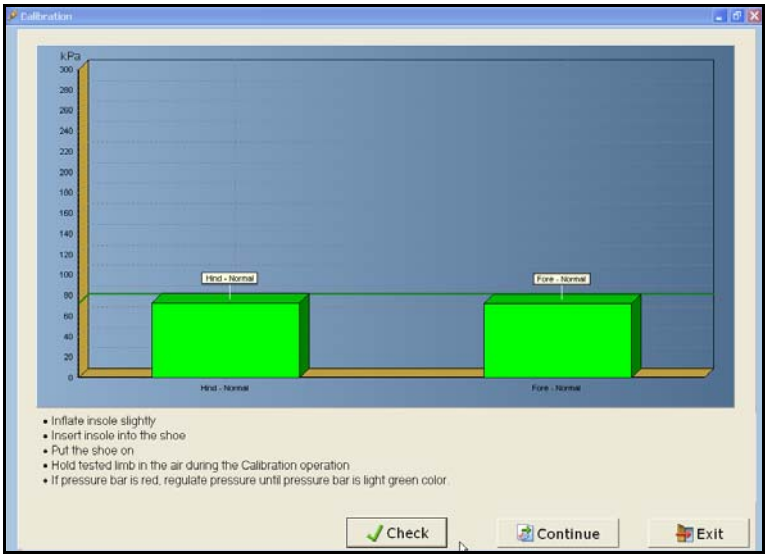
1. In the **Calibration** screen click **Check**.

The screen shows two bars: The left-hand bar shows the pressure reading from the hind foot compartment; the right-hand bar shows the pressure reading for the forefoot compartment. The horizontal green line represents the optimal pressure level. The graphs may be above or below the line, indicating that the pressure is too high or too low. The color of the graph indicates the action you should take.

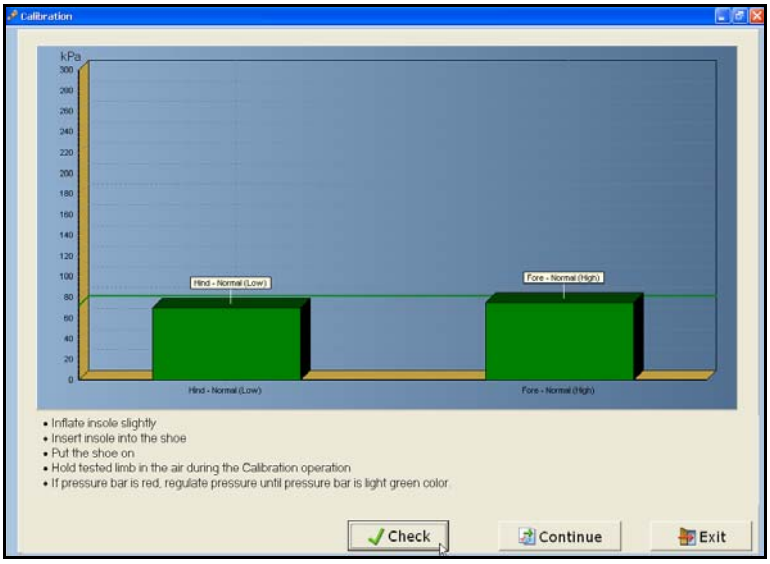
See section 4.1 for details about inflating the insole. It is possible to deflate the insole as follows:

- To reduce air pressure slowly, turn the round button on the manual pump counter-clockwise in a slow and controlled way to regulate air pressure.
- Some users may prefer to deflate all the air, and re-inflate again : turn the button counter-clockwise until all the air is released. Turn the button clockwise to shut off air outflow and re-inflate insole.

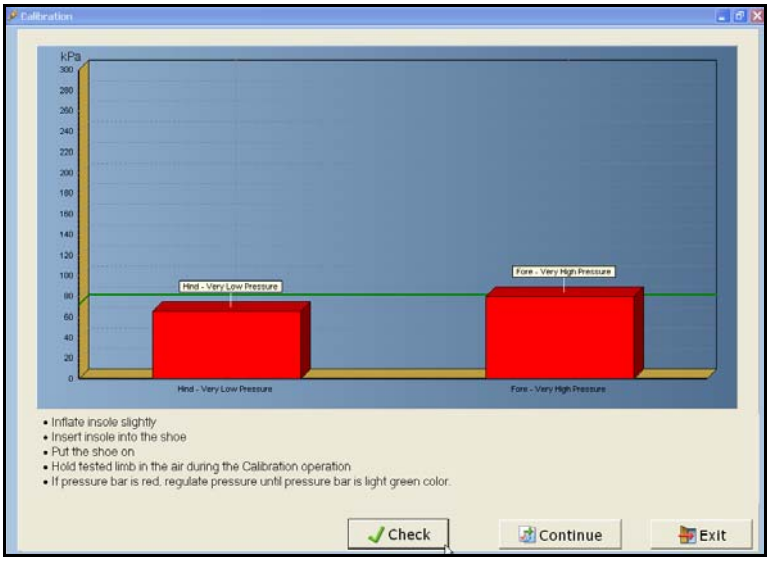
- If the graphs are light green, as shown below, air pressure is at the correct level.



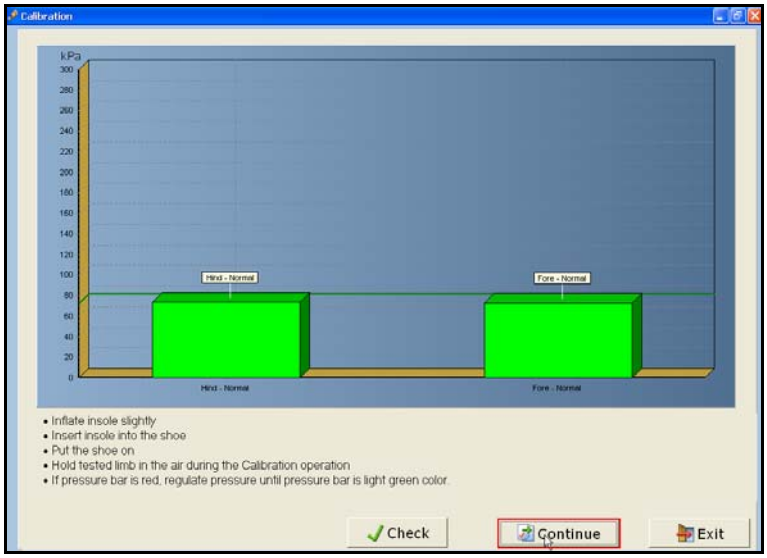
- If the graphs are dark green, as shown below, pressure is slightly too low or too high. Deflate or re-inflate the insole to reach optimal air pressure. You may proceed to workout, but it is recommended that you achieve optimal insole air pressure (indicated by light green bars as shown above). If you choose to continue working with this imprecise air pressure it may affect system accuracy.



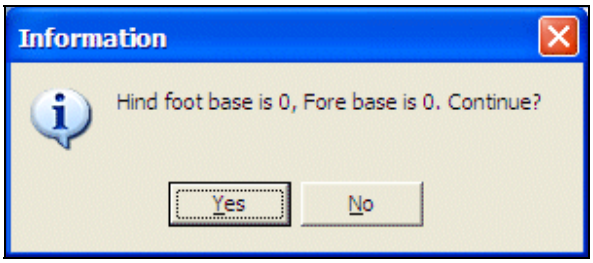
- The red bar as shown below indicates that the pressure is outside the permitted range. The system will not allow you to continue. Deflated or re-inflated The insole as necessary.



2. When you have finished re-inflating the hind and forefoot compartments, check the pressure reading. If pressure is now at the correct level (the bars are green), click **Continue** in the **Calibration** screen.

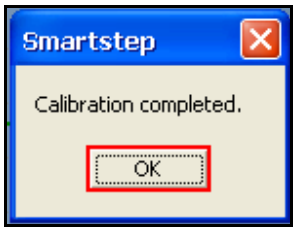


3. A dialog box opens to confirm calibration. The value **0** is the correct pressure reading.



If values are other than **0**, click **No** and repeat the calibration process. Make sure the patient foot is relaxed.

4. If values are **0**, click **Yes**.



5. A dialog box confirms that Calibration has been completed. Click **OK** and proceed with the workout (see section 6 and 7).
6. The Control Unit display shows **1**.

6 Online Work

You are now ready to define and perform the workout with the patient. Sessions may be defined as assessment or training. The assessment process is performed without patient weight bearing limits. It is intended for testing and diagnosis. The training process is performed with patient weight bearing limits. It is intended for the actual training and rehabilitation process.

A session may consist of either one exercise or multiple exercises. Select one exercise at a time in the order in which they are to be performed by the patient.

➔ To define the workout:

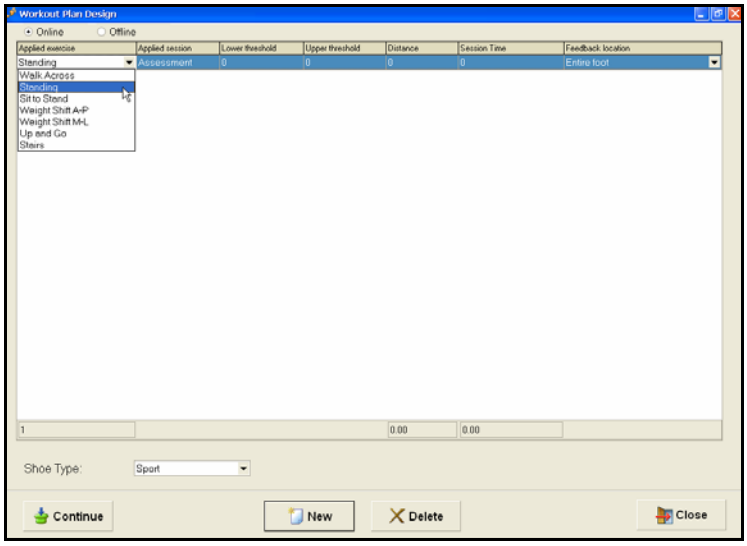
1. In the SmartStep™ software, choose an exercise type, define relevant parameters and set an operation mode (see section 6.1).
2. Define additional exercises for this workout, if needed. These exercises will be performed immediately after the first one, in the order you define (see section 6.1).
3. Instruct the patient on how to perform the exercise, and start the session (see section 6.2).

6.1 Defining Workout Plan and Operation Mode

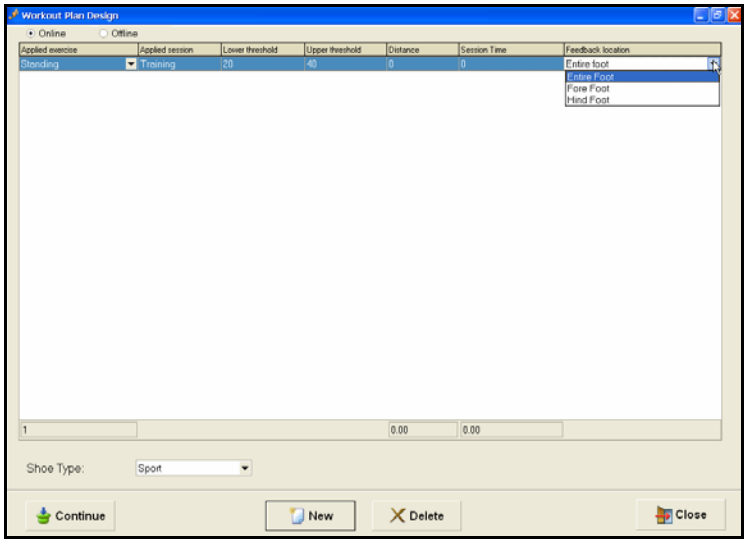
Working online requires the constant communication of the Control Unit with the computer via the Bluetooth.

➔ To define a workout plan:

1. The **Workout Plan Design** screen is opens.
2. Click in the **Applied exercise** combo box, at the extreme left cell of the table row. From the drop-down menu, select one of the static exercises: **Standing, Sit to Stand, Weight Shift A-P**, or **Weight Shift M-L**. It is also possible to select one of the dynamic exercises **Walk Across**, **Up and Go**, or **Stairs.** According to the exercise selected, the system automatically sets the **Online/Offline** parameter. **Online** for static exercises, **Offline** for dynamic exercises. The default can be changed by the user.



3. The **Applied session** column indicates assessment by default.
4. If you are performing an assessment, press the **Continue** button at the bottom left corner of the screen and skip to step 12 below.
5. If you are performing training, click in the **Lower threshold** and **Upper threshold** fields and define the desired weight range. The **Applied Session** changes automatically from Assessment to Training and the Control Unit display changes to mode **2**.
6. **Distance** can be defined in m/ft, which allows speed calculations. If the **Distance** is not defined, the speed results are **0**.
7. If you wish to limit the time of the exercise, enter a period in seconds in the **Session time** field. The exercise ends when this time period elapses (you can stop it manually before the time is up). Leave **Session time** as **0** if you do not wish to impose a time limit.
8. If you set up thresholds, you can select the feedback location from the menu.

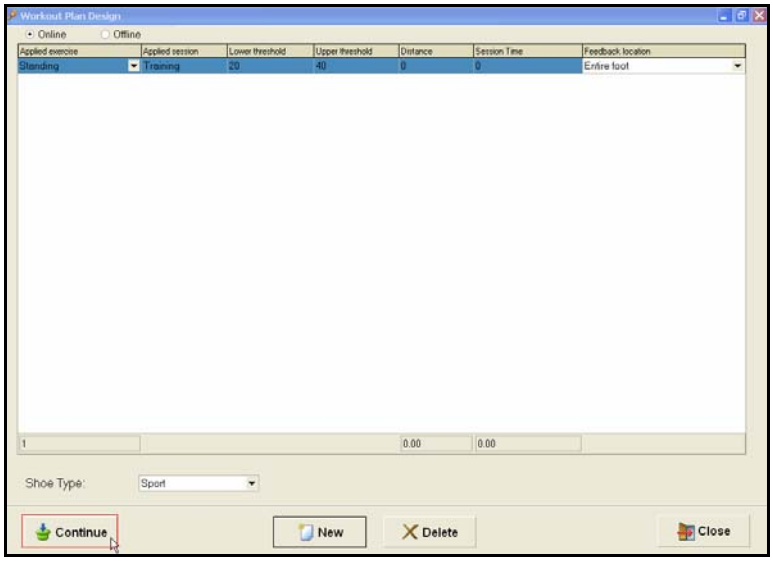


- By default the system provides feedback for the **Entire foot**, and the Control Unit beeps once when the patient enters the desired weight range (defined in the **Lower** and **Upper threshold** fields) for the forefoot and hind foot combined. The Control Unit emits multiple beeps to alert the patient and therapist when the patient exceeds the defined maximum weight-bearing limit.

- Select **Forefoot** if you want the Control Unit to beep once when the patient enters the desired weight range (defined in **Lower threshold** and **Upper threshold** fields) with the forefoot only. The Control Unit beeps repeatedly to alert the patient and therapist when the patient exceeds the defined maximum weight-bearing limit of the forefoot.

- Select **Hind foot** if you want the Control Unit to beep once when the patient enters the desired weight range (defined in **Lower threshold** and **Upper threshold** fields) with the hind foot only. The Control Unit beeps repeatedly to alert the patient and therapist when the patient exceeds the defined maximum weight-bearing limit of the hind foot.

9. The **Shoe Type** field is by default always **Sport Shoe**, as SmartStep™ only works with sports shoes.
10. If more than one exercise is desired, click the **New** button to create a new row, and repeat steps 3 to 9 to define the exercise type and parameters.
11. If you wish to delete an exercise, click to select a row and press the **Delete** button.
12. When you have finished defining the exercise or exercises, in the **Workout Plan Design** screen, click the **Continue** button to begin.

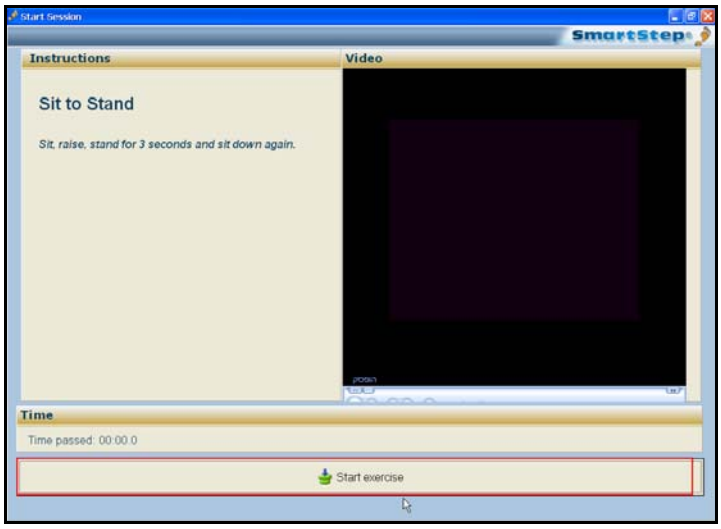


6.2 Performing the Workout

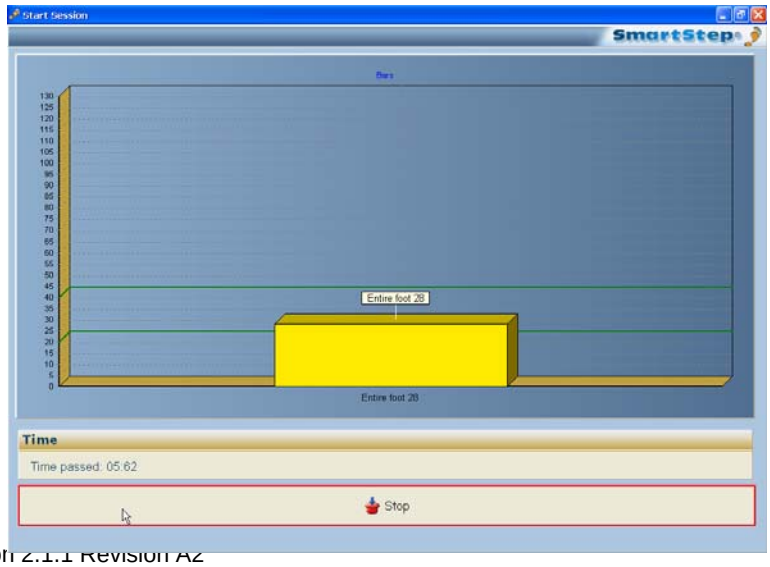
Once you have defined the workout and set the parameters, you are ready to begin.

➔ To start the session:

1. Once you click **Continue**, the **Start Session** screen opens.



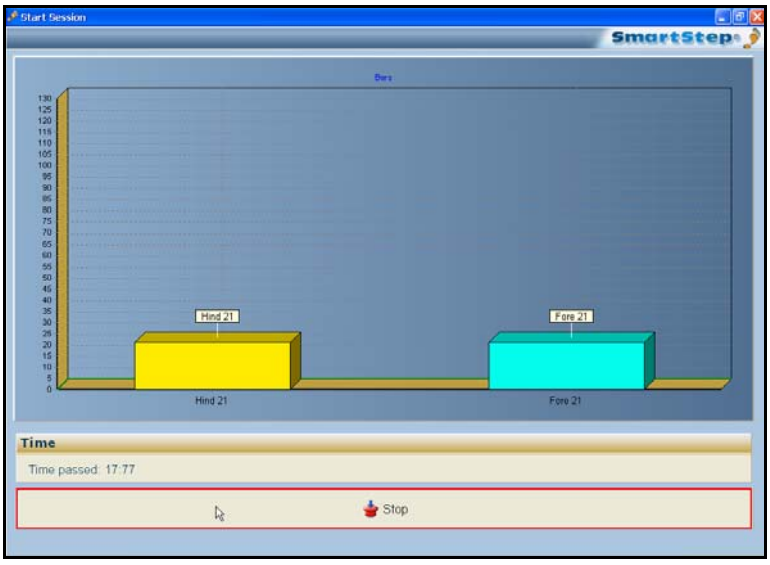
2. The screen displays instructions for performing the exercise, and an instructional video.
3. Once the instructions have been read and the patient is ready, click the **Start Exercise** bar, at the bottom of the screen.
4. During an Online Exercise, the SmartStep™ software displays a dynamic chart, similar to the image below.



The chart has the following elements:

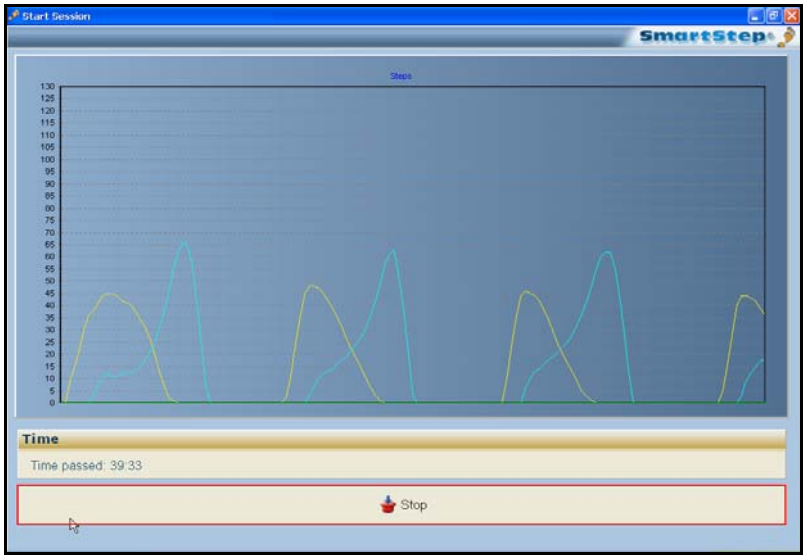
- The vertical axis shows the weight in Kg/lb units.
- The yellow bar shows the real-time force exerted on the entire foot.
- The dark green horizontal lines mark the lower and upper thresholds of the desired weight range.
- Elapsed time is indicated below the chart.

Left-clicking once, anywhere in the chart, switches the Entire bar graph to bars for hind foot and forefoot.



- The yellow bar shows the real-time force exerted on the hind foot.
- The light blue bar shows the real-time force exerted on the forefoot.

Clicking again switches the hind foot and fore foot bar graph to continuous line graphs.



- The horizontal axis shows time (the extreme-right point is the current time).
- The light blue line graph shows the force exerted on the hind foot.
- The yellow line graph shows force exerted on the forefoot.

Clicking a third time switches it back.

The above description is correct for static exercise. In case of dynamic ones, the first graph would be line graph, then a bar graph for the entire foot and then a bar graph for the hind foot and the forefoot.

5. If **Thresholds** have been determined, audio feedback is provided:
   - Silence indicates that the weight the patient is exerting on the insole is under the **Lower Threshold**.
   - One beep indicates that the weight the patient is exerting is between the **Lower** and **Upper Thresholds**.
   - Multiple beeps indicate that the weight the patient is exerting is above the **Upper Threshold**. Therapist intervention may be necessary.
6. To stop the exercise, click the **Stop** bar at the bottom of the screen.
7. At the end of the exercise the results screen opens.

7 Offline Work

During an offline work, live visual feedback is not available but you can have audio feedback. It is possible to store the session data on the Control Unit and download it later to the computer. This allows you to view session results and statistics on the SmartStep™ software.

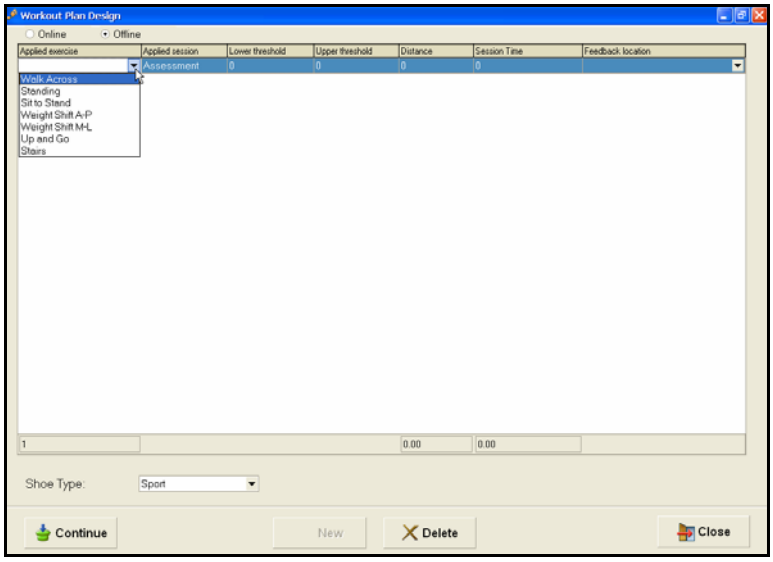
➔ To define the workout:

1. In the SmartStep™ software, choose an exercise type, define the relevant parameters and set the operation mode (see section 7.1).
2. Instruct the patient on how to perform the exercise, and start the session (see section 7.2).
3. The Control Unit, if required, can collects data during the session (see section 7.2).
4. Download the data collected, if you have chosen this option (see section 7.3).

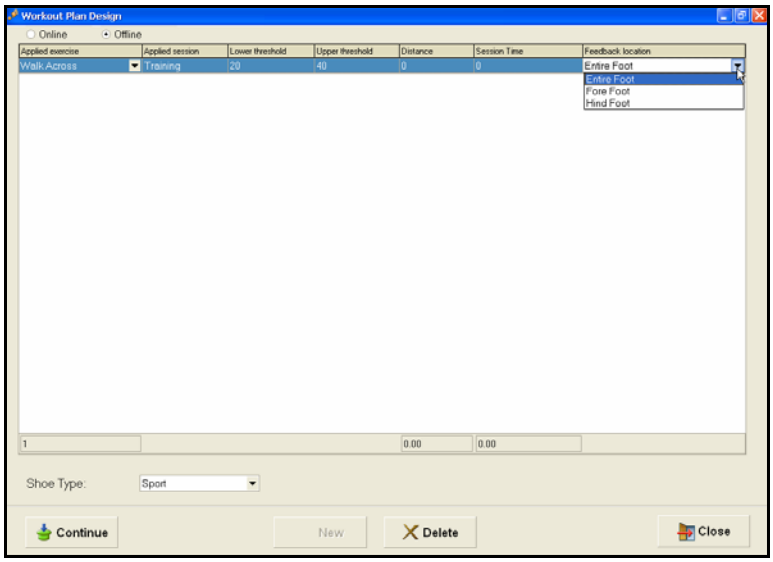
7.1 Defining Workout Plan and Operation Mode

➔ To define a workout plan:

1. The **Workout Plan Design** screen is open.
2. Click the **Applied exercise** combo box, at the extreme left of the table row. From the drop-down menu, select one of the dynamic exercises: **Walk Across**, **Up and Go**, or **Stairs**. You can also select one of the static exercises s**tanding, Sit to Stand, Weight Shift A-P**, or **Weight Shift M-L**. According to the exercise selected, the system automatically sets the **Online/Offline** parameter. **Online** for static exercises, **Offline** for dynamic exercises. The default can be changed by the user.



3. The **Applied Session** column is **Assessment** by default.
4. If you are performing an assessment, Click **Continue** button at the left corner of screen and skip to step 8 below.
5. If you are performing training, click in the **Lower threshold** and **Upper threshold** fields and define the desired weight range. The **Applied Session** automatically changes to **Training** and the control unit display changes to mode 2.
6. If you plan to give the patient audio feedback, open the **Feedback location** combo box.



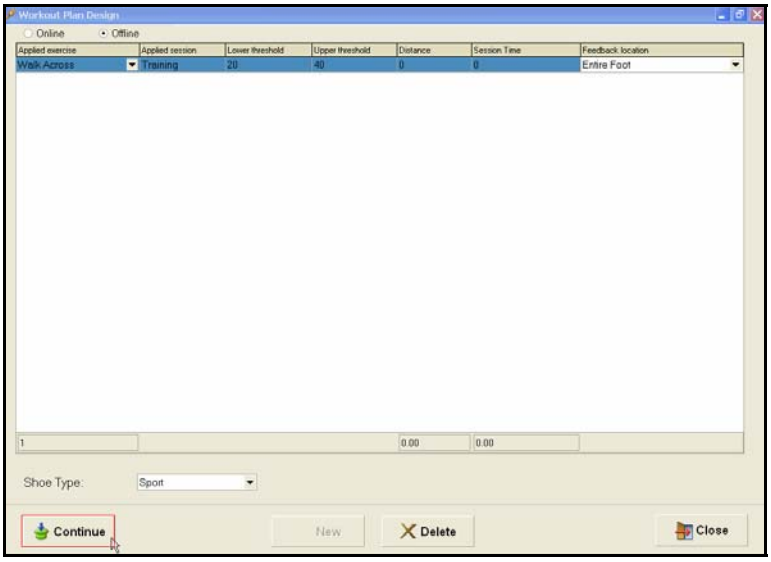
- By default the system provides feedback for the **Entire foot**, and the Control Unit beeps when the patient enters the desired weight range (defined in **Lower threshold** and **Upper threshold**) for the fore and heel combined. The Control Unit beeps repeatedly to alert the patient and therapist when the patient exceeds the defined maximum weight-bearing limit.

- Select **Forefoot** if you want the Control Unit to beep once when the patient enters the desired weight range (defined in **Lower threshold** and **Upper threshold**) with the fore foot only. The Control Unit beeps multiple times to alert the patient and therapist when the patient exceeds the defined maximum weight-bearing limit of the fore foot.

- Select **Hind foot** if you want the Control Unit to beep once when the patient enters the desired weight range (defined in **Lower threshold** and **Upper threshold**) with the hind foot only. The Control Unit beeps repeatedly to alert the patient and therapist when the patient exceeds the defined maximum weight-bearing limit of the hind foot.

7. The **Shoe Type** field is by default always **Sport**, as SmartStep™ only works with sports shoes.

8. When you have finished defining the exercise in the **Workout Plan Design** screen, click **Continue** to begin.

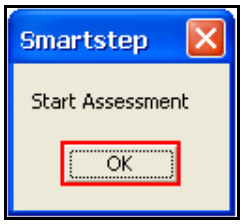


7.2 Performing the Workout

Once you have defined the workout and set the parameters, you are ready to begin the workout.

➔ To start the session:

1. Click **OK**, and instruct the patient to begin the exercise.



2. If threshold has been determined audio feedback is provided.
5. If you want to collect session data on the Control Unit (so you can download it to the computer later), press and hold the Operation button for 2 seconds. A dot is added to the mode number and the unit beeps The dot signifies that data collection is being performed.

6. If you want to stop data collection, press the Operation button once. The dot is removed from the mode number.

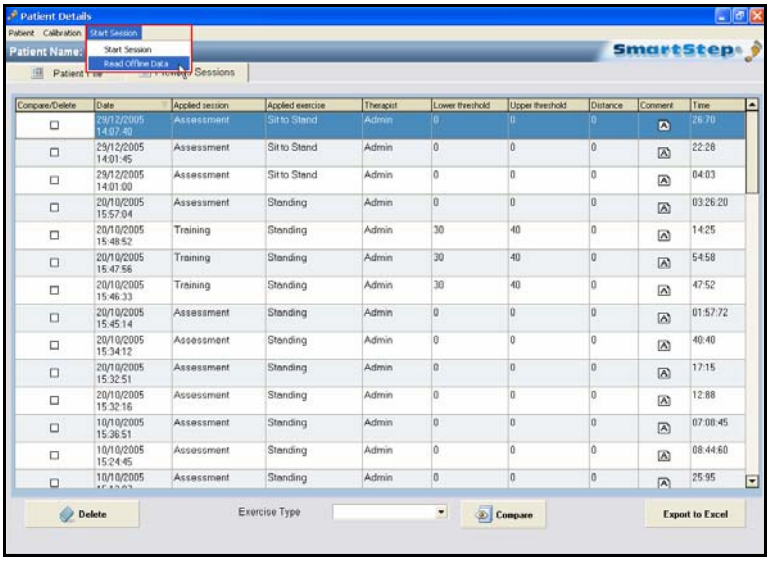
   - Silence indicates that the weight the patient is exerting on the insole is below the **Lower Threshold**.
   - One beep indicates that the weight the patient is exerting is between the **Lower** and **Upper Thresholds**.
   - Multiple beeps in quick succession indicate that the weight the patient is exerting is above the **Upper Threshold**. Therapist intervention may be necessary.

7.3 Downloading Data to the Computer

After the end of the exercise, if you selected an operation mode with data collection (either **1.** with a dot, or **2.** with a dot), you can download the data from the Control Unit to the computer.

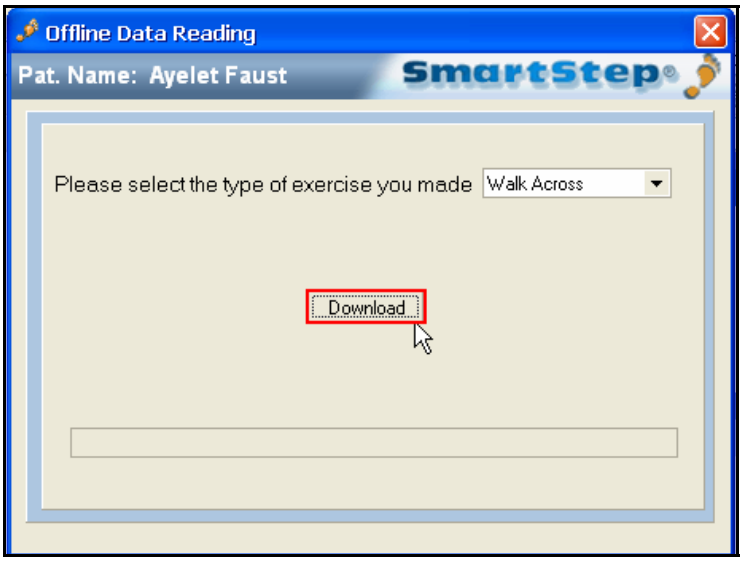
➔ To download session data to the computer:

1. In the **Patient Details** screen, in the **Start Session** menu, select the **Read Offline Data** option.

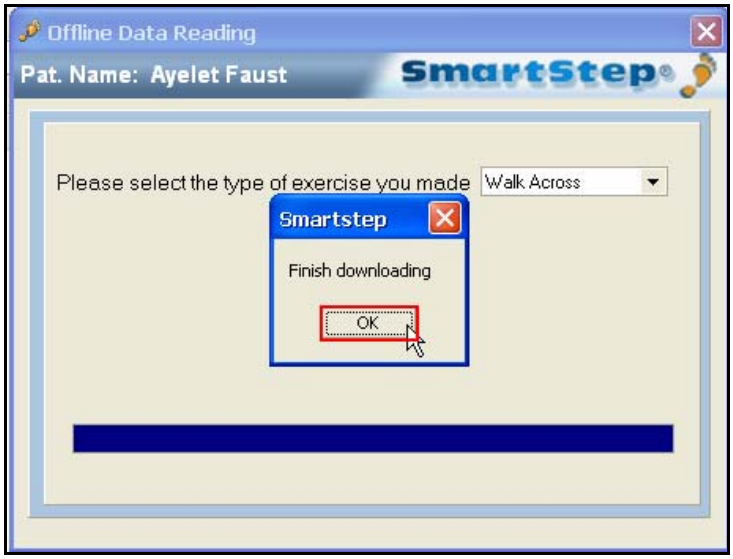


The **Offline Data Reading** dialog opens.

2. Click the **Download** button.



3. Click **OK**.



When download is complete, the operation mode reverts to the last mode before download began (mode 1 or 2) and the software shows the results screen.

8 Tracking the Rehabilitation Progress

The SmartStep™ system records assessment and training sessions. Historical data is collected and saved for each patient. This allows easy retrieval of past sessions. This makes it possible to track the rehabilitation process by analyzing the sessions and comparing them to other sessions.

The screenshots in this chapter were taken from the European version of the software and the weight is shown in Kg. In the American version of the software the weight is shown in lb.

8.1 Opening Previously Recorded Sessions

Online exercises and downloaded offline exercises results are stored in the same format in the **Previous Sessions** screen.

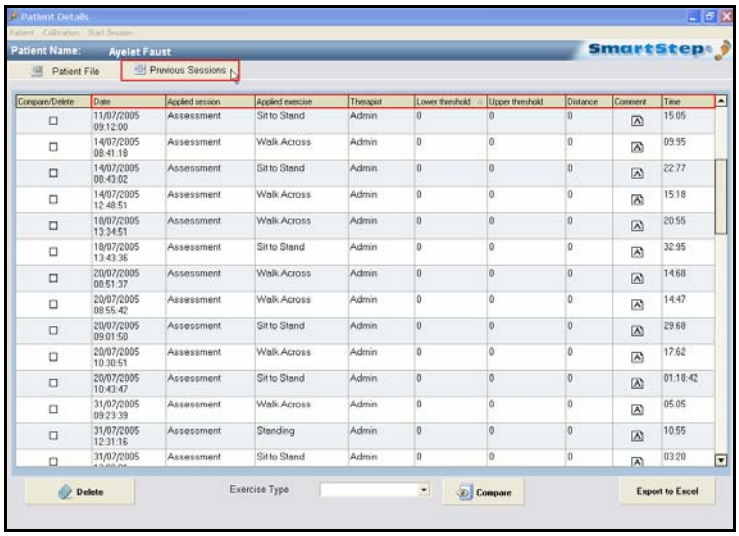
1. Open one previous session (see section 8.1 below).

2. Open several sessions and compare them (see section 8.4).

A *session* is one exercise that was performed by the patient.

To open a previously recorded session:

1. In the **Patient Details** screen, click the **Previous Sessions** tab.



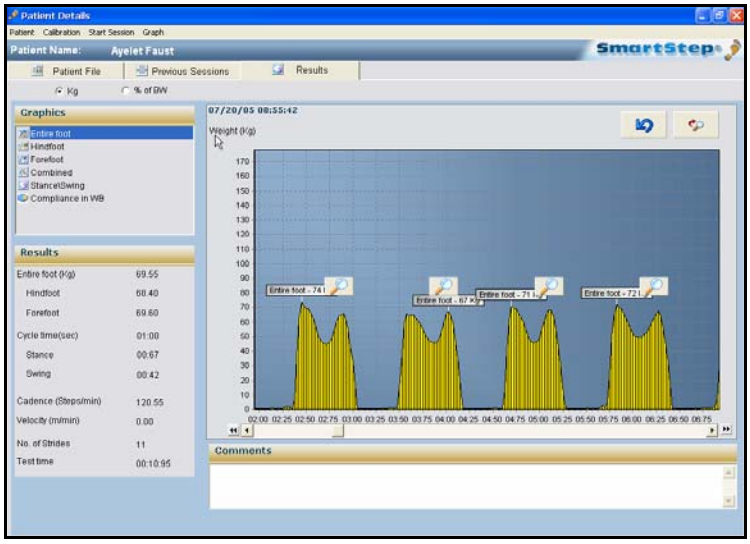
2. To find the session you need, you can:

   - Sort the list by any parameter, by clicking the relevant column's header.

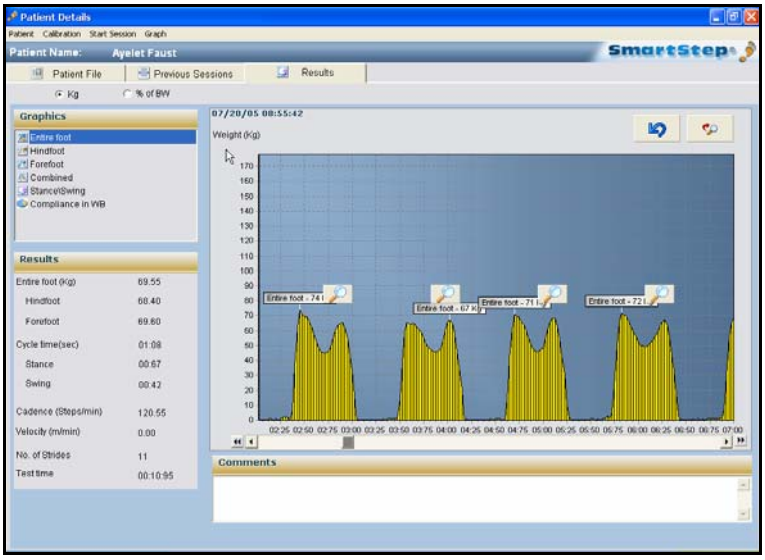
   - Select an **Exercise Type**, from the drop-down menu at the bottom of the screen, to only view sessions with that exercise type. You can view all exercise by choosing **Clear Filter** in the drop-down menu. To view a different exercise select it from the drop-down menu.

3. Double-click on a session to view the results.

   The **Results** tab screen opens, displaying session statistics. See section 8.2 to learn more about statistics for a single session.



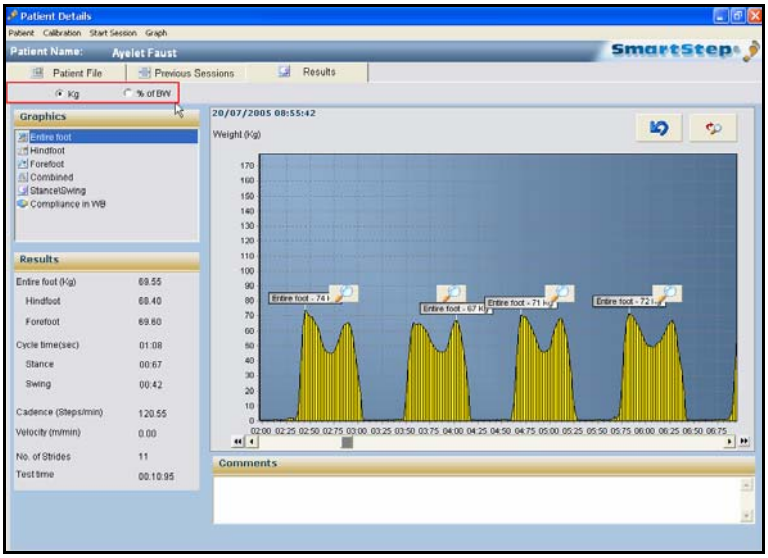
8.2 Understanding Session Results



The **Results** tab, shown above, appears automatically at the end of the online session, after downloading of offline session data or after double click the specific session at the previous session screen. The following sections explain how to access and interpret session information.

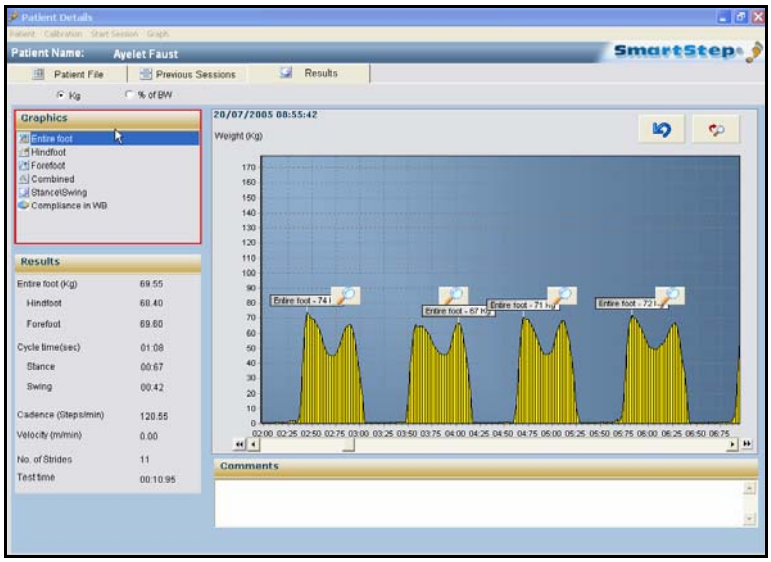
8.2.1 Switching Between Absolute and Relative Weight

The radio buttons, at the top left of the **Results** screen, allow you to toggle between absolute weight (**Kg/lb**) and weight relative to the patient's body weight (**% of BW**).



8.2.2 Charts

The **Graphics** area, in the top left of the **Results** tab screen provides a list of charts. Clicking a chart's name displays the chart.

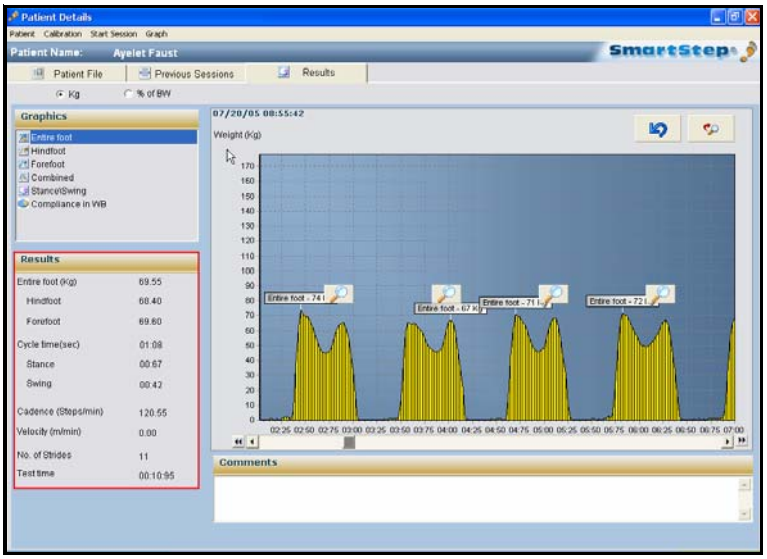


The following table lists, describes and shows the charts available.

Chart	Description
Entire Foot	Weight exerted on the entire foot. Weight (absolute or percentage) is displayed vertically, while time is displayed horizontally. Use the scroll bar at the bottom of the chart to proceed from the beginning (left) to the end (right) of the session.
Hind foot	Weight exerted on the hind foot is displayed in yellow. Weight (absolute or percentage) is displayed vertically, while time is displayed horizontally. Use the scroll bar at the bottom of the chart to proceed from the beginning (left) to the end (right) of the session.
Forefoot	Weight exerted on the forefoot is displayed in blue. Weight (absolute or percentage) is displayed vertically, while time is displayed horizontally. Use the scroll bar at the bottom of the chart to proceed from the beginning (left) to the end (right) of the session.
Combined	Weight exerted on the hind foot is displayed in yellow and on the forefoot in blue.
Stance/Swing	Shows the percentage of time the patient spent in stance and swing during dynamic exercises. Absolute time (in seconds) is also displayed.
Compliance in WB	Shows patient compliance in dynamic exercises. Compliance is displayed as a percentage of the total steps when the maximum weight on the whole leg was in compliance with the **Lower** and **Upper** weight thresholds.

8.2.3 Statistics

The **Results** area, at the bottom-left of the **Results** tab, provides a list of aggregate statistics for the session.



Dynamic Exercise Results (as shown above)

Statistic	Units	Description
Entire Foot	**Kg/lb**	Average weight exerted on the entire foot during the session.
Forefoot	**Kg/lb**	Average weight exerted on the forefoot during the session.
Hind foot	**Kg/lb**	Average weight exerted on the hind foot during the session.
Cycle Time	**Sec**	Average gait cycle time (stance + swing).
Stance	**Sec**	Average stance time in seconds.
Swing	**Sec**	Average swing time in seconds.
Cadence	**Steps/min**	Number of patient's steps a minute.
Velocity	**m / min or ft / min**	Patient's velocity.
No. of Strides	**Strides**	Number of strides the patient took in the session.
Test time	**min/sec**	Session time.

Static Exercise Results

Statistic	Units	Description
Entire Foot	**Kg/lb**	Peak weight exerted on the entire foot during the session.
Forefoot	**Kg/lb**	Peak weight exerted on the forefoot during the session.
Hind foot	**Kg/lb**	Peak weight exerted on the hind foot during the session.
Test time	**min/sec**	Session time.

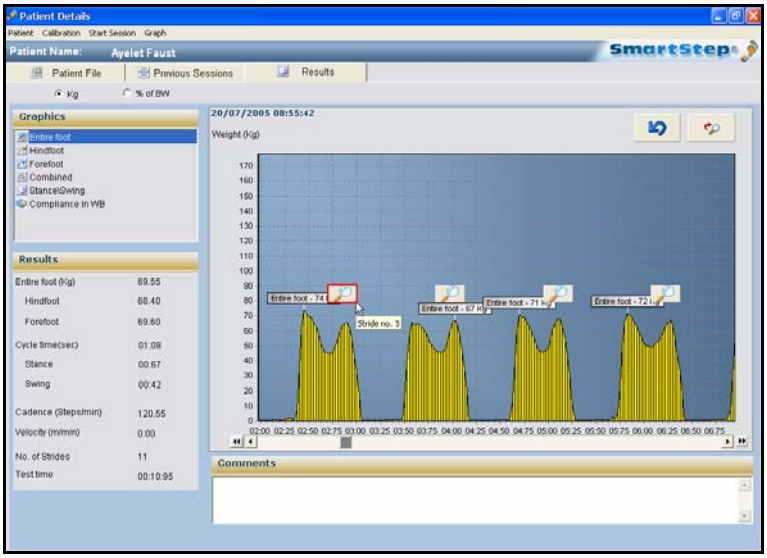
8.2.4 Viewing *Stance/Swing* Composition for Specific Steps

All the continuous-data charts (Entire Foot, Forefoot, Hind foot and Combined) allow you to view the stance/swing time composition of specific steps taken by the patient.

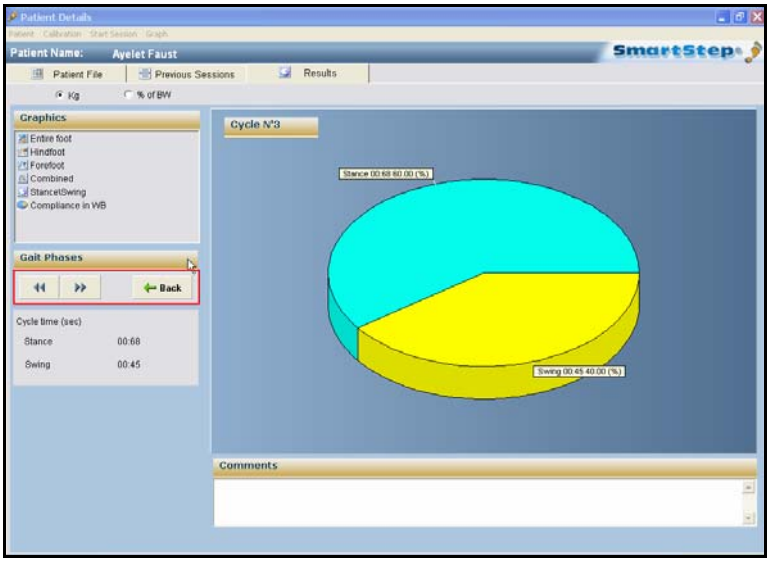
➔ To view stance/swing compositions for steps:

1. Scroll left or right to view the step that interests you.
2. Click the magnifying glass icon above the step.

Viewing Stance/Swing Composition for Specific Steps



3. The total stance time, the total swing time and their percentage of the total session time is shown as a pie chart. The cycle number is displayed in the top-left corner.



In the **Gait Phases** area on the left, use the and buttons to display the previous or next cycles, or click **Back** to go to the first step.

8.2.5 Comments

It is possible to type comments at the bottom of the graph screens. When you exit the screen, a dialog box will ask you if you want to save the comment.

8.3 Manipulating Session Charts

The Graph menu, found on the main menu bar in the **Results** screen, has several options that allow you to manipulate the session charts

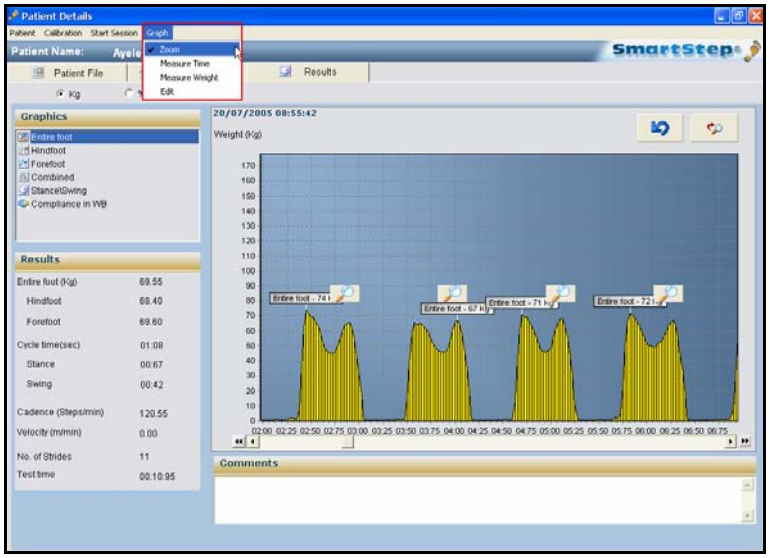
1. Zoom (see section 8.3.1)
2. Measure Time (see section 8.3.2)
3. Measure Weight (see section 8.3.3)
4. Edit (see section 8.3.4)

8.3.1 Zooming In and Out

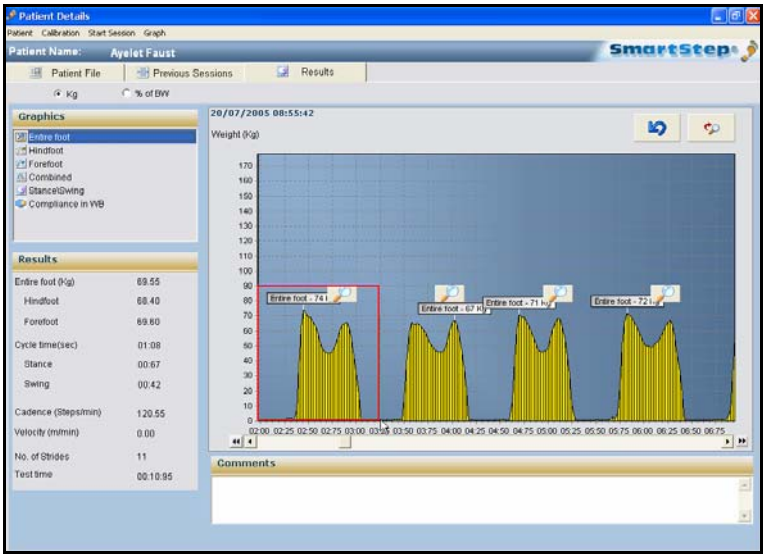
To zoom in on a graph:

1. In the **Graph** menu, select the **Zoom** option.

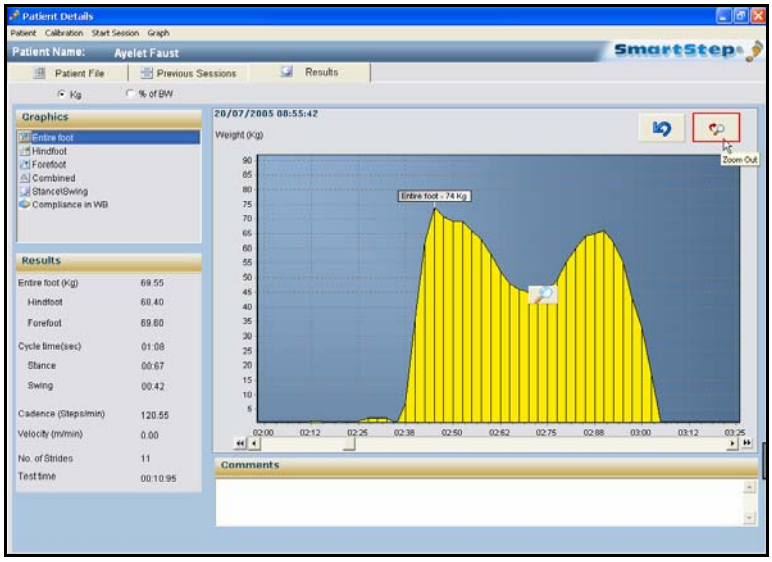
Zooming In and Out



2. Drag the mouse cursor to draw a rectangle from the upper left point to the lower right point of the area in the graph you wish to magnify. The selected area appears in detail.



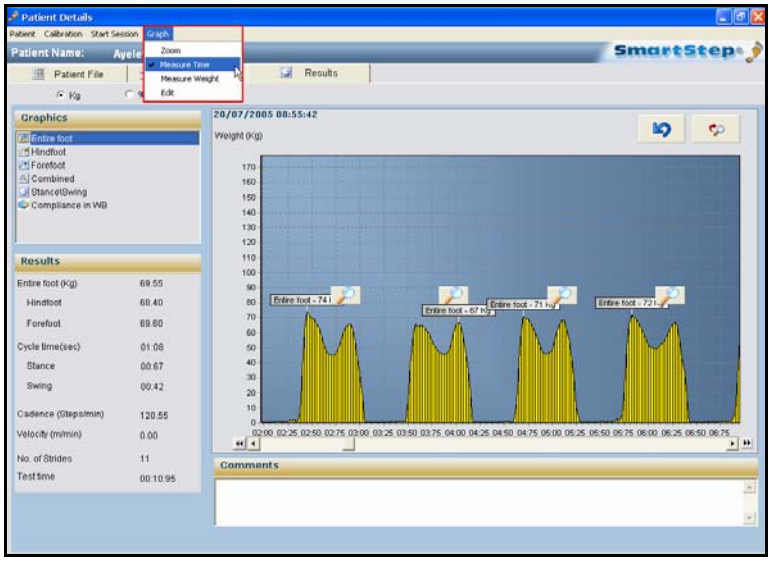
3. To return to the previous full graph view click **Zoom Out**, or drag the mouse curser to draw a rectangle from the lower right point to the upper left point at any screen location.



8.3.2 Measuring Time

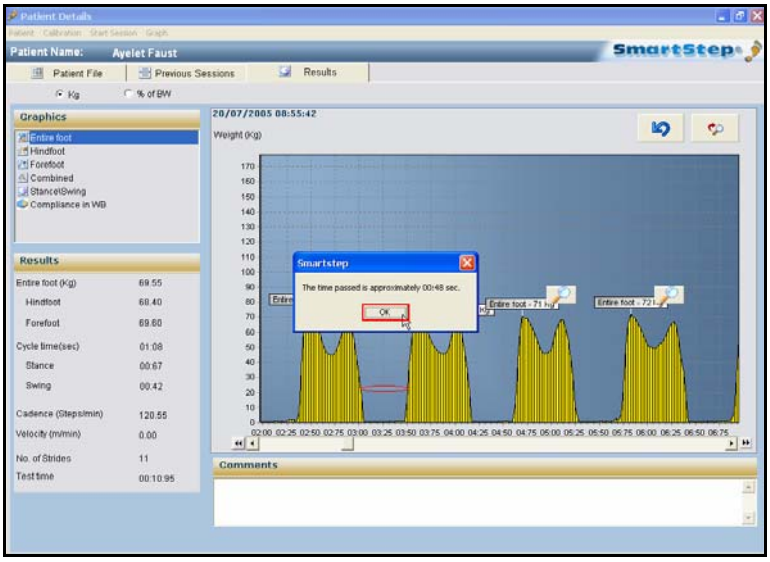
➔ **To measure time between two points:**

1. To obtain a measurement of the time between two points, in the **Graph** menu, select the **Measure Time** option.



2. In the graph, click on the start point of the period you wish to measure, and drag the cursor to the end point.

   A dialog box opens that displays the time in seconds between the two points.

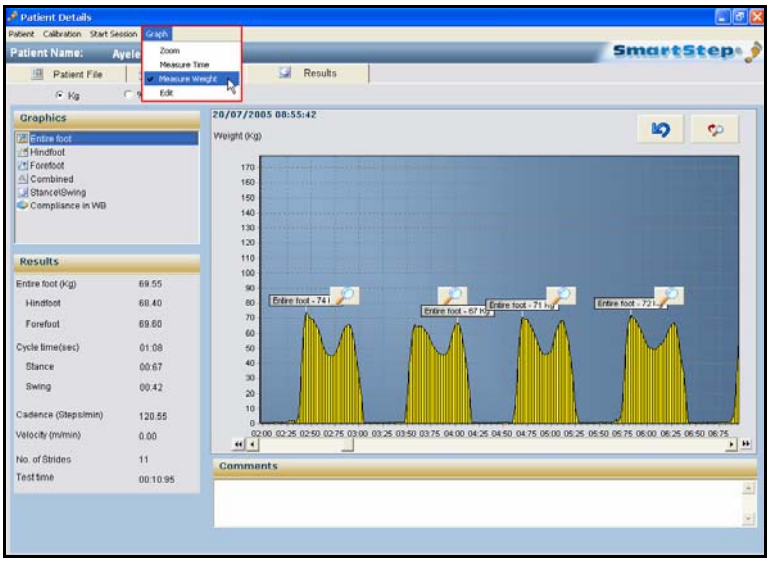


3. Click **OK** to return to graph.

8.3.3 Measuring Weight

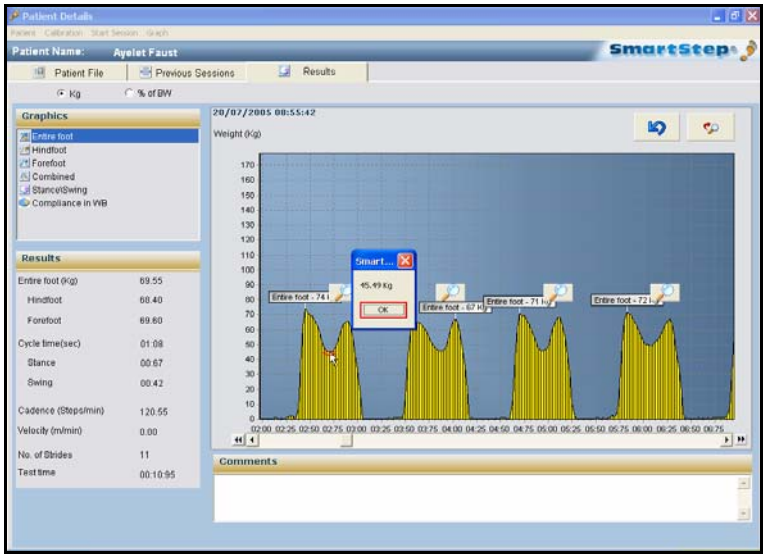
➔ **To measure weight:**

1. To obtain a weight measurement at a given point, from the **Graph** menu, select the **Measure Weight** option.



2. In the graph, click on the point at which you wish to measure the weight.

   A dialog box opens that displays the weight at the selected point.



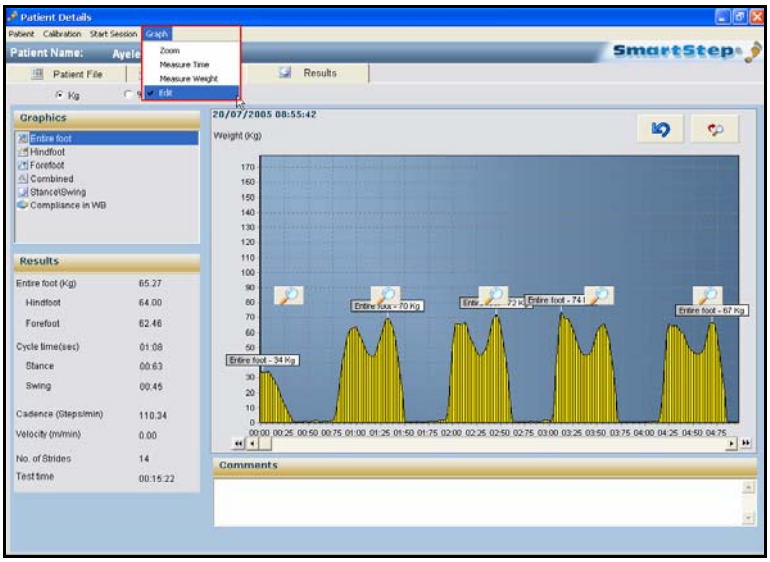
3. Click the **OK** button to return to graph.

8.3.4 Erasing Session Segments

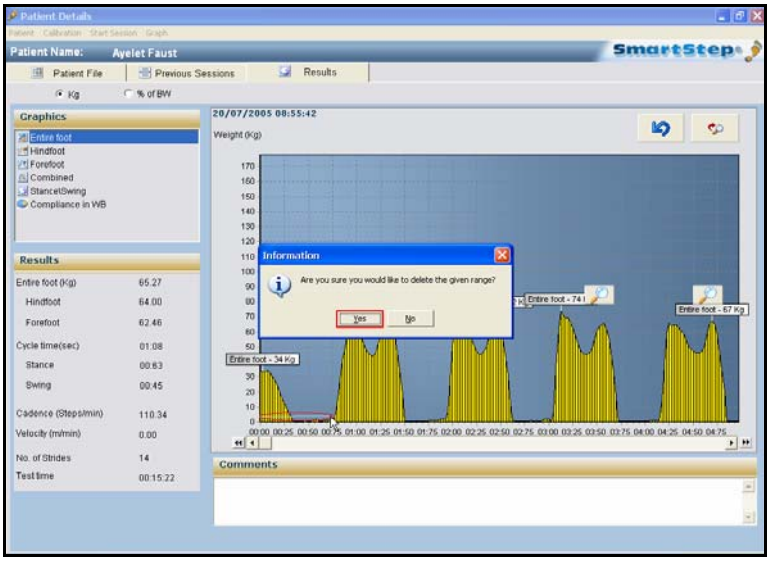
This option may be used to erase noise at the beginning or end of the session, or inactivity in the middle, for example if the patient has stopped performing the exercise. All session data are backed up, so the session can be recovered if parts of it are erroneously erased.

To erase session segments:

1. In the **Graph** menu, select **Edit**.



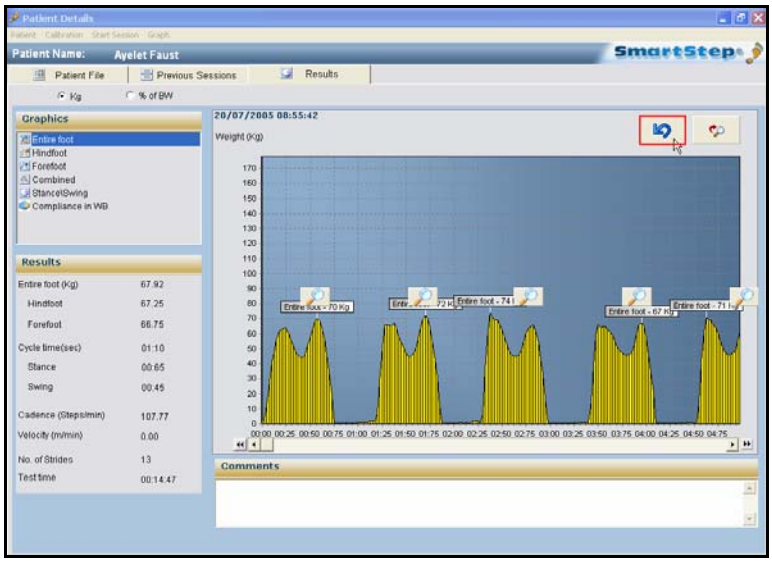
2. In the graph, click on the start point of the period you wish to erase, and drag the cursor to another point.



3. A window opens to confirm deletion. Click **Yes** to delete.

This action does not affect the database. Information is deleted from the display window only.

4. You can always restore deleted data by clicking the **Undo** button.

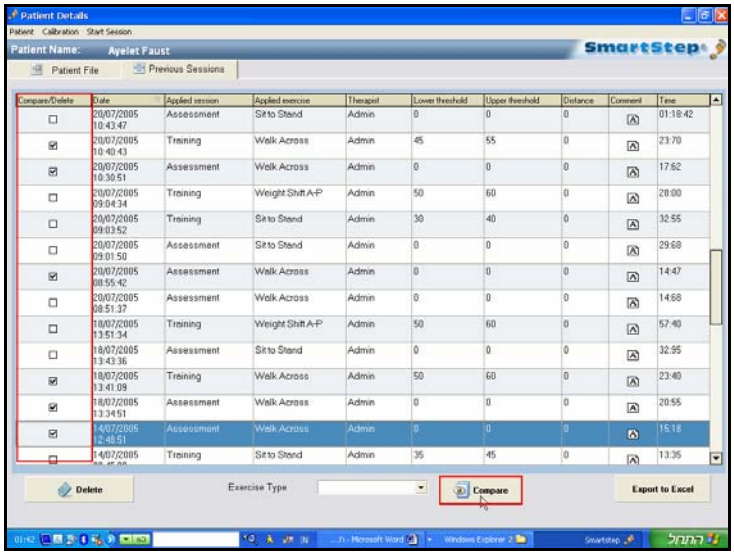


8.4 Comparison Statistics

The SmartStep™ enable to compare one parameter at a time. Each bar at the **Results** tab screen represents a different session.

To open several sessions:

1. In the **Previous Sessions** screen, find the sessions you want to compare (up to six session), and click the relevant checkboxes in the **Compare/Delete** column.

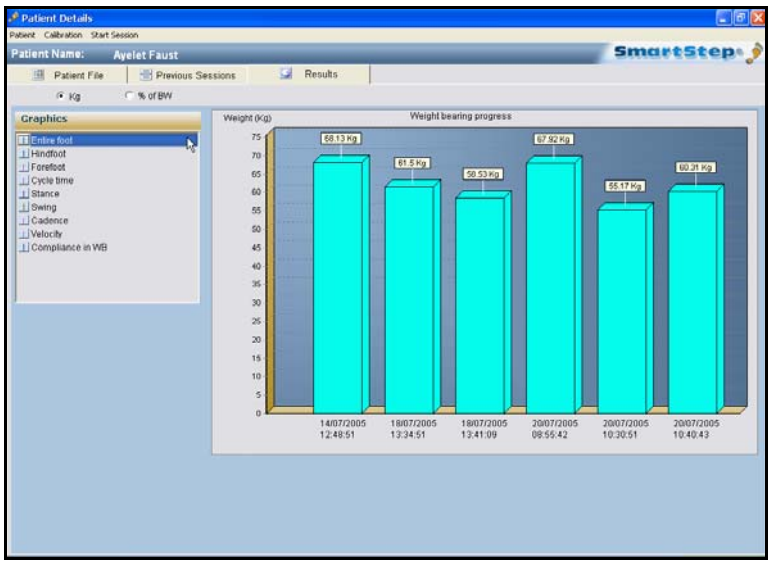


You may only compare sessions consisting of the same exercise.

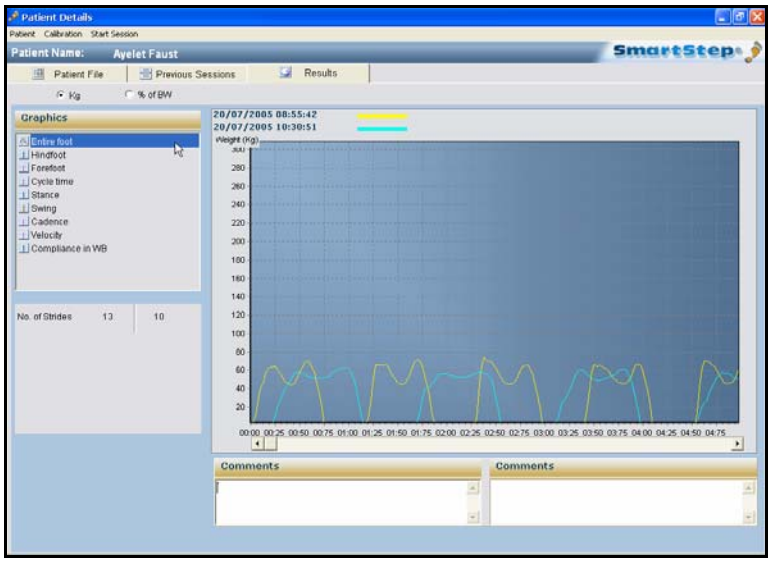
2. Click the **Compare** button, at the bottom of the screen.

The **Results** tab screen opens, showing the comparison statistics in bars, for the sessions you selected.

Move between comparison graph by clicking on the relevant graphic option on the left side of the screen.



3. By double click the screen, a line comparison graph is available only for the entire foot and only for two sessions. In the line graph, one session would be represented by a blue line and the other by a yellow line, with the session dates marked respectively.



8.5 Session Deletion

In the **Previous Sessions** screen, click the relevant checkboxes in the **Compare/Delete** column. Click the **Delete** button bellow. Click **OK** to confirm.

9 Turning the Control Unit Off

At the end of the session:

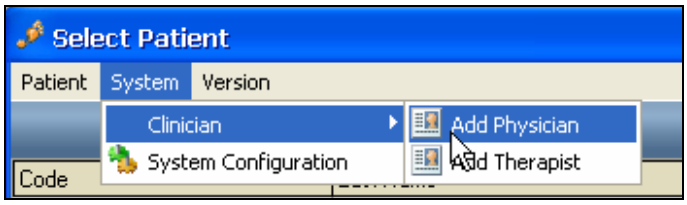
- Press the Operation Button, to move between modes (1-4) until the unit is switched off.
- Or turn the Control Unit off by pressing the Operation Button continuously.

10 Maintenance and Administration

10.1 Creating Users and Changing Passwords

➔ To create a new user:

1. In the **System** menu, in the **Select Patient** screen, select the **Clinician** option.
2. In the submenu, choose either the **Add Physician** or **Add Therapist** option.



The current list opens.

3. Click the **New** button to add a new doctor or therapist.

   The following dialog box opens.

4. Enter the user name, create and confirm a password, and click the **Save** button.
5. If you wish to edit a currently existing user, click the **Edit** button in the list of doctors and therapists.

   The edit user dialog opens.

6. Edit the user name or password (and confirm), and click **Save**.

10.2 Recharging Batteries

You must charge the battery when the **Battery Status** indicator on the Control Unit lights up in orange.

You may only use the battery charger supplied with your SmartStep™ System.

➔ To recharge the battery:

1. Remove the Control Unit from the leg and make sure the unit is off. See chapter 9.
2. Lightly release the inner Velcro strap and remove the protective plastic cover from the bottom of the unit. Plug the battery charger cable connector into the socket at the bottom of the unit.

3. Plug the battery charger line connector into an electrical outlet, the green light appears.
4. **Battery charging** indicator is green while the battery is charging.
5. Do not disconnect the charger until the battery is fully charged. This takes at least 10 hours, if the battery is completely empty.
6. Once the battery is fully charged, unplug the battery charger from the wall electrical outlet.
7. Disconnect the battery charger connector from the socket at the bottom of the Control Unit.

If the Control Unit does not run for at least three hours after it has been charged, try charging the battery again. If, after re-charging, the unit runs for less than three hours, contact your Andante dealer.

11 Troubleshooting

The following sections outline common problems and suggest how to solve them. If you encounter a problem that is not listed below, please contact your Andante dealer.

Control Unit

Problem Description	Reason	Solution
Control Unit does not switch on.	**Operation Button** pressed once.	Press the **Operation Button** twice.
	Battery is depleted.	Charge the Control Unit, according to manufacturer instructions. See User's Guide.
Display shows E and the Control Unit beeps.	Insole air pressure is incorrect - **Calibration** did not take place.	Inflate Insole to correct air pressure.
	Treated leg was not in the air - **Calibration** did not take place.	Make sure treated leg is in the air during **Calibration**.
Display shows C and the Control Unit beeps.	Wireless connection was lost**.**	Return to wireless range and click **Connect.**
Display shows S and the Control Unit beeps.	Sensor problem.	Contact the Andante dealer.
Display shows P and the Control Unit beeps.	Insole is deflated.	Inflate the insole, using the pump. If the problem persists, change insole.
Control Unit beeps and switches off after the Display shows P.	Insole is substantially deflated.	Change insole.
Display shows H and the Control Unit beeps.	System exceeded maximum values.	Wait 10 seconds to continue work. Or To continue working immediately press the Operation Button.
Control Unit beeps and switches off after the Display shows L.	Battery is depleted.	Charge the Control Unit, according to manufacturer instructions. See User's Guide.
No audio feedback.	Control Unit is not in mode 2.	Switch to mode 2.
	Weight thresholds were not broadcasted to the Control Unit.	Repeat weight threshold broadcast.

Software

Problem Description	Reason	Solution
Pressure bar is red after inserting the insole into the shoe.	Pressure outside threshold boundaries.	Inflate insole to correct air pressure.
An error message during **Calibration: Reset Failed.**	The Control Unit is off.	Turn the Control Unit on and click **Check.**
An error message during the calibration: **Reset Failed** and the Control Unit is beeping and displaying an E.	The insole inflated pressure is incorrect and the system failed to **Calibration**.	Inflate insole to correct air pressure, reconnect to Control Unit and click **Check.**
	Treated leg was not in the air - **Calibration** did not take place.	Make sure treated leg is in the air during **Calibration**.
An error message during data transfer**: Could not start session: Run Calibration again.**	The Control Unit is off.	Turn on the Control Unit and repeat the **Calibration** process.
An error message during download: **Could not read from unit. Please try again.**	The Control Unit is off.	Turn on the Control Unit, repeat the **Calibration** process and click **Download**.
Connection message: **Wireless Communication?**	The Control Unit is off.	Turn on the Control Unit and click on **Connect.**
	The COM port configuration is wrong.	Change the COM port configuration, repeat the **Calibration** process and click **Connect.**
	The Bluetooth Adapter is not connected to the computer (red icon).	Connect the Bluetooth Adapter to the computer. Make sure that the icon color changed to white. Click **Connect.**
	The Control Unit is outside the wireless range.	Return to wireless range and click **Connect.**

Parts and Accessories

Replacement Parts Order Form

Please send this form by fax or mail to your local SmartStep™ dealer.

Part	Catalogue No.	Quantity Required	Comments
Insole (European size 37/38, US size 6/7)	20-05-37		
Insole (European size 41/42, US size 8.5/10)	22-05-41		
Insole (European size 43/44, US size 10.5/11.5)	23-05-43		
User's Guide V2.1.1	80-20		
Quick Guide V2.1.1	80-21		
Battery charger (EU)	40-37		
Battery charger (USA)	40-36		
Manual pump	50-30		
Bluetooth USB adapter	40-68		
Control Unit revision A2	40-07		
Control Unit Strap	60-11-01		