Balance International Innovations

GmbH

Questions and Answers

Sensors

What type of sensor is used?

A highly accurate angular velocity sensor is used. The sensor has a drift so low (maximum standard deviation of the error 0.01 deg/sec) that it can sense the Earth's rotation so that the error for a 20 sec recording is maximally 0.2 deg.

Why is a highly accurate sensor needed?

When standing on two legs eyes open or closed, the peak-to-peak angular deviations have mean values for normal subjects of 1 to 2 deg, whereas those with a vestibular loss have mean values some 0.4 degs more. The standard error of these means is about 0.15 degs. Clearly if we did not have an accurate sensor these differences in the Romberg tests would be washed out with measurement errors.

What is the relationship between SwayStar measurements and the angular displacements of the body's centre-of-mass (COM)?

Because the sensor is usually mounted at the level of lumbar 2-3 there is probably a highly correlated relationship because the COM is very close to this point (56% of body height). Ongoing research comparing the SwayStar measurements with those of a video-based motion analysis system will will provide an exact answer to this question.

Why measure angle at the level of the lower back?

This angle gives an indication of how heaviest part of the body is tilted. If this part is tilted beyond 4 degs backwards a fall will occur independent of how the legs are tilted. If the whole body moves as an inverted pendulum, the angle of the body is recorded by the sensor. If the legs and chest moved oppositely (and there is evidence in the literature for this) then the measurement is of the upper body only.

Installation

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Questions and Answers

Do I need administrative rights to run the SwayStar™ software?

No you do not! The software first installation and update requires administrative rights to run for installation. During the installation process appropriate access rights to the SwayStar program folder and registry key are assigned to the group of "Authenticated Users". The initial database is created in the "Shared Documents" folder, the Documents folder of the "All User (%ALLUSERSPROFILE%)" profile.

What happens to my data and settings if I install a SwayStar™ software update?

If the installer recognizes the presence of an existing installation it creates first a backup of the SwayStar program folder. To ensure a completely recoverable backup, the installer only performs if the SwayStar software is not running. The update may modify the following:

1.   Program files
2.   Language resources
3.   Reference Values

The following items are not affected by an update:

1.   Program settings and
2.   Patient recordings (database)

What are the SwayStar.xxx.cab files found in the installation folder just one directory level above the SwayStar™ executable program?

These files are backup archives produced by the installer. Before installing an update the installation software creates a backup archive of the folder "%programfiles%\BII CH GmbH\SwayStar" and the registry settings of the program. The number indicates the backup number. The file with the highest number represents the most recent backup. The backups are intended for an emergency rollback after a faulty update installation.

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How do I roll back an update installation?

Basically by restoring the backup created by the installation mentioned above. First you must identify the version of the most recent backup - lets assume it is 003 in the following - and ensure that the SwayStar™ software is not running. Next you run the console program cmd.exe ([Start],[Run],cmd.exe). At the command prompt switch to the appropriate folder by entering the following command: cd "%programfiles%\BII CH GmbH". Verify that you are in the correct directory by executing a dir command. Finally you call the restoration script as follows: RestSway Swaystar.003.cab

How do I transfer a SwayStar™ installation to another computer?

To transfer an installation the following steps.

1.   Install SwayStar™ on the new machine. It is not important to take the newest version. It is just a preparative step. It is important that you prevent SwayStar™ from running after the installation.
2.   On the old machine run SwayStar™ and export the registry settings ([Help], [Export Registry Settings …]).
3.   Now copy the program files folder "%programfiles%\BII CH GmbH\SwayStar™" from the old machine to the new machine. Permit files on the prepared target machine to be overwritten.
4.   Next copy the databases from the old machine to the new machine. Preserve folder structures.
5.   Finally copy the registry export file to the new machine - whereever you want to - and import the settings by double clicking on the file within an explorer window.
6.   The procedure is finished by installing the newest update on the new machine.

Network

What happens if my personal firewall prevents SwayStar™ from accessing the internet?

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Modern security software suits have several stages of protection. These program may control

1. the internet access of an application (client),
2. listening on an TCP/IP port (server),
3. an application from [spawning](#) another program as a child process,
4. writing and modifying certain registry keys.

Thus blocking internet access prevents you from checking for and downloading updates and keyword lookup on Google. Blocking child program execution may prevent you from accessing the help pages and setting up a BlueTooth connection to your SwayStar device.

We would like to put the SwayStar™ database files on a file server. Is this possible?

Yes! Actually we recommend this for fixed installations. Most companies backup the contents of their file servers on an automatic schedule during times of low business activities. Moving to the server the SwayStar database frees you from having to carry out a separate backup solution which you need in any case. To accomplish the move the following steps are required.

1. Connect your computer running the SwayStar software on to the network.
2. Create a network share on your file server.
3. Map a network drive to the share.
4. Copy the database to the file server.
5. Run SwayStar.
6. Enable "Allow switching to an alternate Database" under options.

7. Switch to the database located on the server by using the "Open DB" command under "Options".

Printing

How can I create a custom header file?

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The task is best done with a word processor or presentation software. Most companies own already some templates that include corporate logos to start from. So we recommend that you start with your favorite program and template. Adjust it for your needs always remembering that the aspect ratio width to height should somewhere between 9.5 and 9.7 in order to fit without any distortion into the printout. When you are finished with the design go into the preview or presentation mode of the software and zoom until the width of the preview matches best your screen width. At this point you hit the [Prnt Scrn] key that takes a snapshot of your desktop and places it into the clipboard. Run "Paint" that is part of the Microsoft Windows operating system and insert the capture as a new image. With the select tool of "Paint" you can cut out the region of interest having the correct aspect ratio. Reinsert the cut as a new image and save it as your image header for SwayStar™. You will find "Paint" in the "Accessories" folder of the start menu.

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