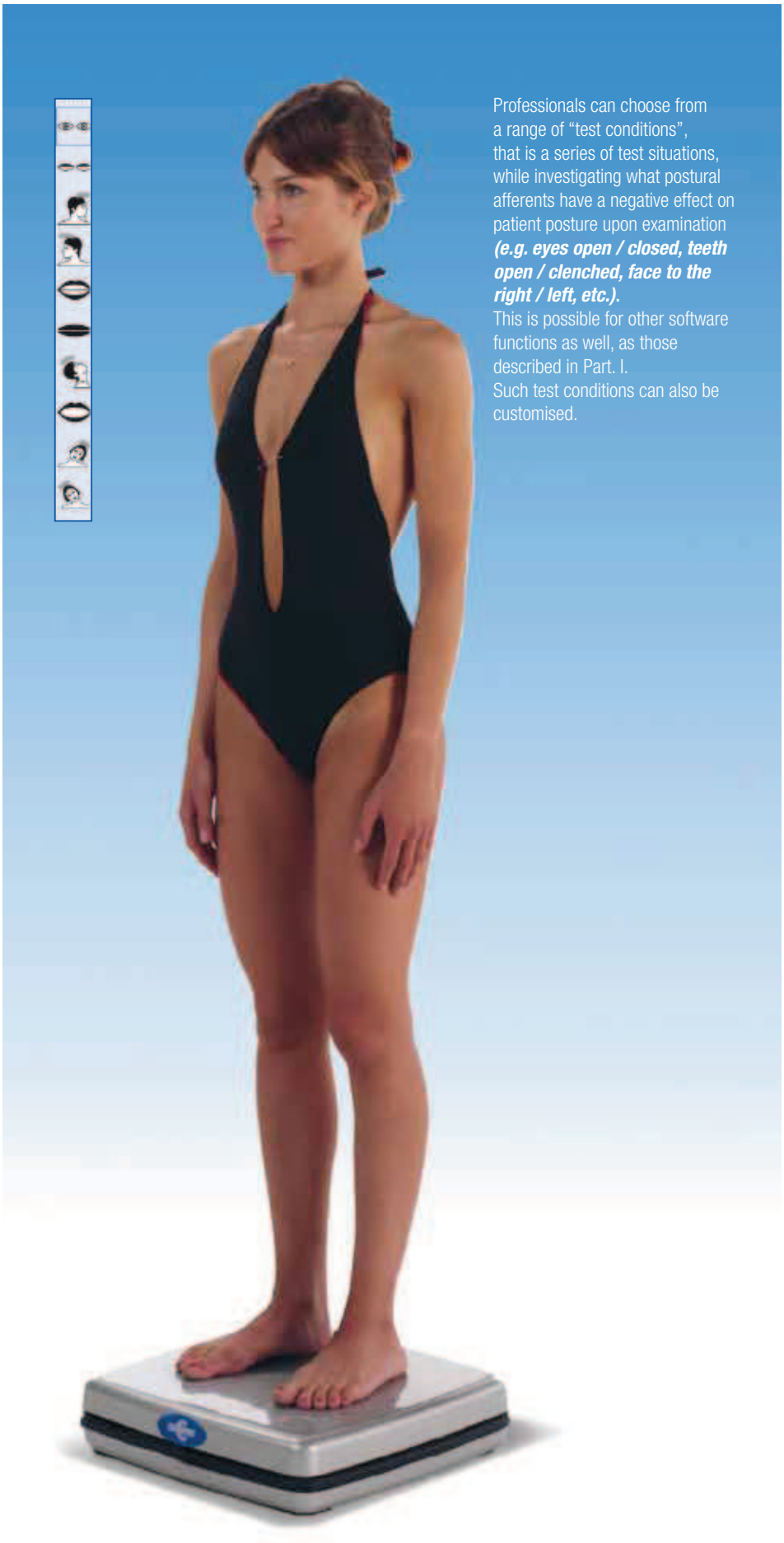
Lux Postural Platform and its software



Professionals can choose from a range of "test conditions", that is a series of test situations, while investigating what postural afferents have a negative effect on patient posture upon examination ***(e.g. eyes open / closed, teeth open / clenched, face to the right / left, etc.).*** This is possible for other software functions as well, as those described in Part. I. Such test conditions can also be customised.

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LUX POSTURAL PLATFORM

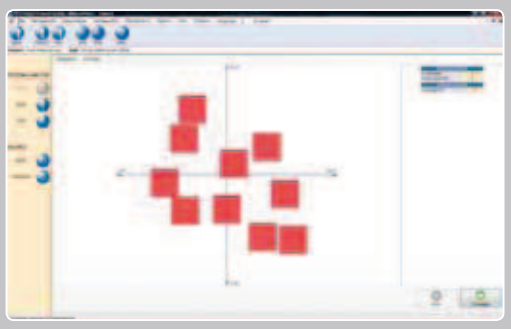
It is a typical stabilometric platform with **three load cells** arranged along a circumference at an angular distance of 120°. The fibreglass platform allows collecting data on the position of the centre of gravity (barycentre) of a patient and then analysing his/her stability.
A multilingual, specific software is supplied.
The device can be integrated in either Physical Analyzer or the GPS 100 posture analysis system.
Dimensions 42 x 42 x 10 h cm
Capacity 135 kg

The software allows:

static examination, that is the analysis of the position, balance and barycentre of the patient;
a dynamic examination, that is the analysis of the frequency and direction of postural oscillation, the "Fourier" analysis on the patient's transverse and longitudinal movement, and examinations of head and eye movements, occlusal movements, sub-occipital rachidian receptors.

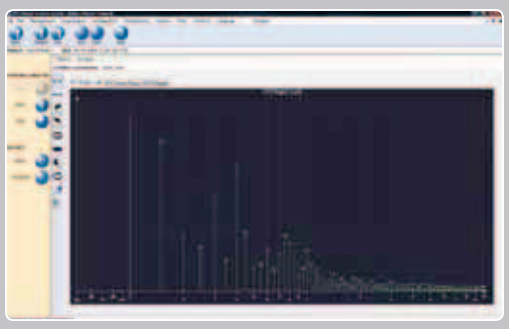
Interdisciplinary approach

The anomalies that will appear in the graphs will be interpreted to help determine the necessary treatment. For example patients with problems of a structural and, cranio-sacral nature, or visceral problems, etc. shall receive treatment by osteopaths, chiropractors or therapists.
An eminently vestibular problem (Postural Romberg test) will involve otorhinolaryngologists.
An ophthalmologist shall be consulted if the eye-tracking examination shows a significant variation of the barycentre.
Differences in values between the open and closed mouth and any descending problems will require an intervention by an odontologist.
Diagnosis of vertebral problems (lumbago, cervicalgia, trauma outcomes, etc.) will call for orthopaedists and physiatrists.
A podologist/osteopath shall be responsible of treating ascending problems of a podalic type.
The Stabilometric platform can be extremely useful in the field of legal medicine to recognize real situations in which whiplashes may have occurred, distinguishing them from simulated accidents.



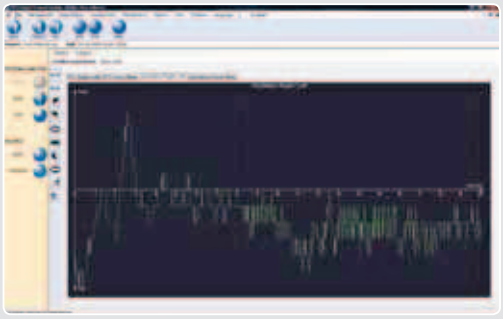
Postural Rehabilitation Feedback

The platform allows for posture rehabilitation exercises as well. The patient is asked to perform those movements that allow him/her to reach certain targets on screen while maintaining the upright stance, shifting his/her weight on the platform.



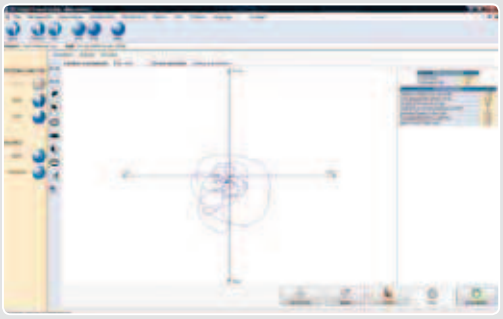
Fourier analysis of balance

Fourier analysis allows identifying which body parts are performing movements and their frequency as well. The whole body is represented in the fundamental frequency analysis while other body parts are represented in the harmonics displayed in the graphs. The analysis is carried out in the 2 axes in space, analysing lateral and longitudinal movements.



Balance analysis with the oscilloscope

The analysis with the oscilloscope allows separate analysis of lateral and longitudinal shifting as a function of time. This allows identifying correlations between such shifts and their degree.
It is different from the “statokinesigram” for stability analysis



Statokinesigram for balance analysis

The Lenght / confidence area ratio is that number that identifies the energy spent by a patient to maintain balance.

POSTURAL DATA MANAGEMENT

Once all the necessary information about the patient’s history have been collected, the examination can start. The actual postural situation of the patient is an essential point as it provides useful information about the patient’s postural strategy. It is important to analyse initial posture before modifying any afferents.

Warning

The GPS 400 system has the same software functions as the Lux Postural platform, except those implying rehabilitation exercises.