

"The Clinical Advantage"™



# Balance System™ SD

Static and Dynamic Balance Testing and Training



## Balance Assessment & Conditioning

Athletes to Older Adults

The Balance System SD improves balance, increases agility, and develops muscle tone, with the broadest range of treatment options.

[www.biodex.com/balance](http://www.biodex.com/balance)



**NEW** Balance System SD includes enhanced features that make the already most popular balance system even better.

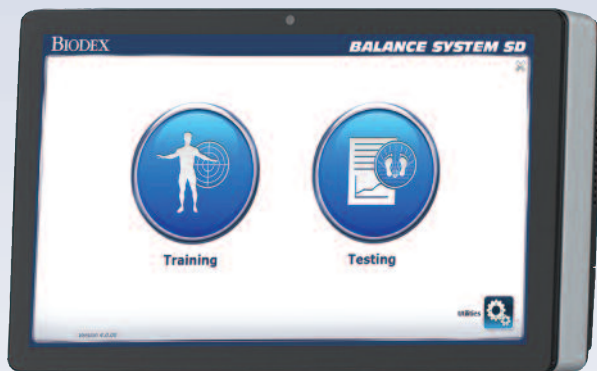
**BIODEX**

[www.biodex.com](http://www.biodex.com)  
**1-800-224-6339**

Int'l 631-924-9000

# Balance System SD™

## FEATURES:



NEW 15.6" touch-screen display

- **Static and Dynamic (SD)** – Offers twelve levels of platform control as well as static force setting.
- **Balance Training** – Includes proprioception and stabilization exercise, range of motion and weight shift exercises.
- **NEW Windows Operating System and Large Display** – intuitive navigation, large touch-screen display (15.6") for improved user interface. Can also accommodate external keyboard and a mouse.
- **NEW Microsoft SQL Relational Database** – allows you to easily store and retrieve patient data, multiple tests per patient. Export to Excel® for reporting and analytics.
- **Objective Documentation** – Printed color reports prove need, track progress and document outcomes – ideal for insurance reimbursement.
- **Automated G-code Calculations and Impairment Level Reports** – Objective reporting documents percentage of impairment with associated modifier code, functional limitation G-code categories and patient status – important for Medicare reimbursement. Increases efficiency and productivity, improves documentation of rehab effectiveness, helps with audits and reduces claim denials.
- **Enhanced Sensory Integration Balance Testing Capabilities** – Ability to perform a modified version of the Clinical Test of Sensory Integration of Balance (CTSIB) for postural stability, popular for concussion management. Modify existing CTSIB and BESS test parameters or create custom sensory integration protocols.

- **Custom Reporting** – Allows entry of unique comments to test results and assignment of CPT codes.
  - **NEW Normative Data** – Healthy populations stored for test comparison of older adults for fall screening and student athletes for concussion management.
  - **Audio Biofeedback** – For cueing successful target hits.
  - **Visual Biofeedback** – Prompts patients into proper postural and balance control.
  - **Multipurpose Connectivity** – Allows connection to larger monitors and LCD projectors to enhance interaction for visually impaired patients.
  - **Adjustable Support Handles** – Lock in place for safety or swing away for an unobstructed, open environment for a variety of training activities.
  - **Locking Surface** – Ensures safe "on and off" patient movement.
  - **Mobility** – Transport wheels allow easy relocation between clinic and community for fall screening programs and health fairs.
  - **Video and Audio Out** – Bolsters connectivity options to other devices.
  - **USB Compatibility** – Accommodates external keyboard, a mouse, printing devices for remote operation and USB memory devices for data transfer and software upgrades.
  - **NEW VibroTactile Feedback** – Enhanced biofeedback for Biodex balance technology.
- Learn more about the VibroTactile System, page 7.*



## NEW Clinical Guideline Peripheral Neuropathy

A Clinical Guideline for the Treatment of Patients with Peripheral Neuropathy using Biodex Balance System SD, BioStep, Gait Trainer and Unweighing System.

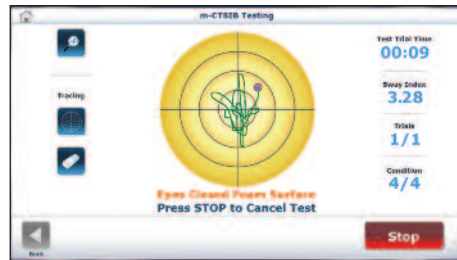
Download the Clinical Guideline  
[www.biodex.com/guideline/pn298](http://www.biodex.com/guideline/pn298)

**Prove Need. Progress. Outcome** – All test results and training sessions can be stored and printed. Comparison to normative data helps communicate need, progress and outcome.

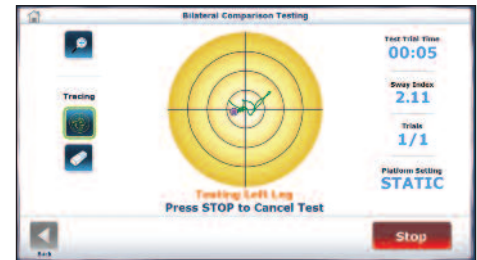
## Testing Modes: Interactive, Static and Dynamic



**FALL RISK** – Measures and compares sway velocity against normative data to predict risk. The sway velocity index is derived from velocity and patient height.



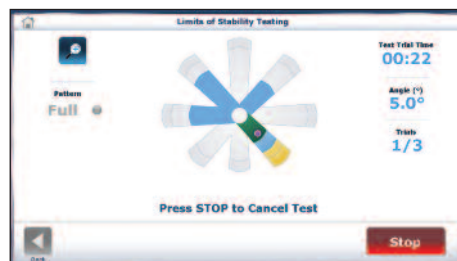
**SENSORY INTEGRATION** – Includes the mCTSIB test, the BESS test and the ability to create custom sensory integration and balance tests.



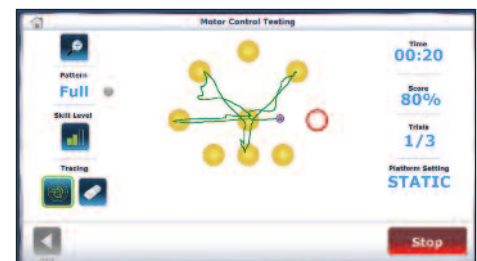
**BILATERAL COMPARISON** – Measures and compares the stability of one leg to the other, used primarily for testing orthopedic injuries.



**POSTURAL SWAY** – Quantifies a patient's ability to maintain center of balance. The "Stability Index" is the average position from center, while "Sway Index" measures movement.

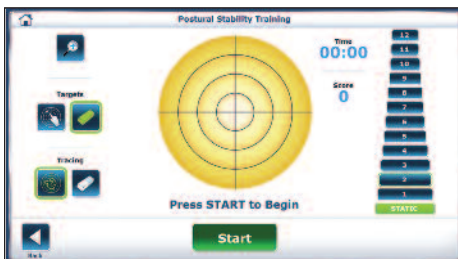


**LIMITS OF STABILITY** – Determines how far a patient can sway with no preset distance required. The angle of sway is a predetermined standard.

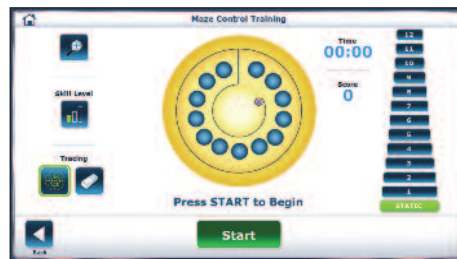


**MOTOR CONTROL** – Shift weight to move the cursor from center – to a blinking target – and back to center quickly with as little deviation as possible.

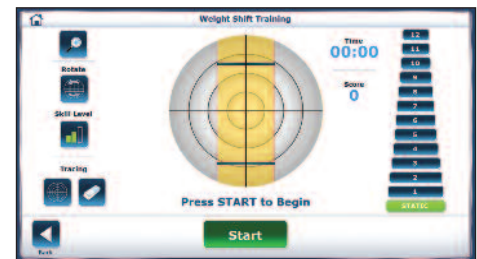
## Training Modes: Interactive, Static and Dynamic



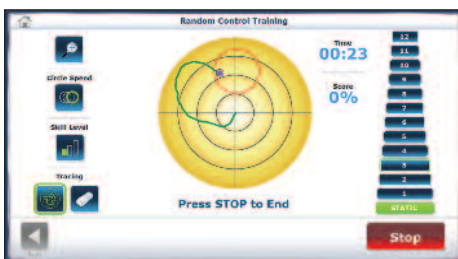
**POSTURAL STABILITY** – Emphasize specific movement patterns or strategies by placing marker anywhere on the screen. Score reflects how many times a target is hit.



**MAZE CONTROL** – This defined movement pattern encourages proprioception and motor control. Various skill levels challenge a wide variety of patients.



**WEIGHT SHIFT** – Patients are challenged to shift and control their center of gravity within two parallel lines, in the medial lateral, anterior posterior and transverse planes of movement.



**RANDOM CONTROL** – Introduces a cognitive component to balance training. An undefined movement pattern where the patient is challenged to keep pace with a moving target. Ideal for motor control and vestibular training.



**MOTOR CONTROL** – Challenges the user to move through a movement pattern consistent with one's "sway envelope", which is the area a person can move their center of gravity within their base of support.



**PERCENT WEIGHT-BEARING** – Provides real-time feedback on a patient's foot, ankle, knee, hip, body side, and such. In this mode, targets can be set that encourage patients to focus on goals in anterior, posterior, medial, and lateral movements.



# Broaden Your Applications Increase Your Clinical Value

## The many applications of balance testing & training



### Help Secure ACO Relationships

Hospitals need to ensure that patients discharged from their care will be managed efficiently and effectively so as to minimize the potential for readmission. Facilities will be expected to demonstrate to hospitals that they are equipped and skilled to be a partner in an ACO and receive the referrals from the hospitals.

The Biodex Balance System offers technology, along with associated printed reports documenting need, progress and outcomes. This increases clinical efficiency, productivity, and helps reduce the rate of readmissions – making you an attractive partner to ACO's.

#### ■ PEER PERSPECTIVE

*"The Biodex Balance System SD fits perfectly into a program of traditional techniques that I use in balance development classes, and in our senior fitness test. The technology is an attractive addition to our overall balance program."*

- Kimberly Morris, Fitness Specialist  
Sagewood Wellness Center  
Phoenix, AZ

[www.biodex.com/casestudies/balance](http://www.biodex.com/casestudies/balance)

**Marketing Support Program** includes access to customizable marketing materials to assist with community outreach, advertising and physician referrals.

### Fall Risk Screening and Conditioning

The Balance System SD includes a comprehensive Fall Risk Screening & Conditioning Program and Protocol, consistent with American Geriatrics Guidelines. Identify a person at risk to fall in just two minutes by comparing their balance test results to age-dependent normative data.

*Includes a Marketing Support Program\*.*



### Senior Rehab



Tackling the needs of the older adult requires an understanding of the complex physiology of this population segment. As part of the Balance & Mobility product series, the Balance System SD addresses age-related diseases by aiding in increasing mobility, addressing fall risk, improving balance, developing muscle tone and increasing agility.

### Neurorehabilitation



The training exercises of the Balance System SD are geared to improve strength, range of motion, gait and balance for those patients suffering from

neurological disorders associated with Parkinson's, Stroke or Peripheral Neuropathy. In practice, the Balance System can capture, quantify and document a patient's relative tendency to overcompensate to one side or the other. This information can often determine a true course of treatment.

*Includes a Marketing Support Program\*.*



### Vestibular Disorders

The Balance System SD is an evaluation tool, as well as a rehabilitative device, ideal for patients experiencing vestibular issues. Balance retraining exercises are designed to steady a patient while walking or standing through improvements in coordination of muscle responses and organization of sensory information. Static and dynamic tests are administered to gauge a patient's balance – objective reporting and comparisons to normative data aid in the development of individual exercise plans.

The **NEW** VibroTactile System provides patients with vibrotactile biofeedback resulting in improved postural control – eliminating the need for subjective verbal and hands-on therapist cueing.

## Wellness

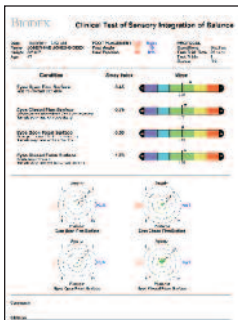
The Balance System SD is simple to use with an intuitive touch-screen display. Wellness members require minimal supervision and can progress through the various levels at their own pace. Training exercise includes static and dynamic balance activities, weight shifting, increasing limits of stability, and improving reaction time. The system produces color reports to provide motivating feedback.

## Sports Medicine/Orthopedic



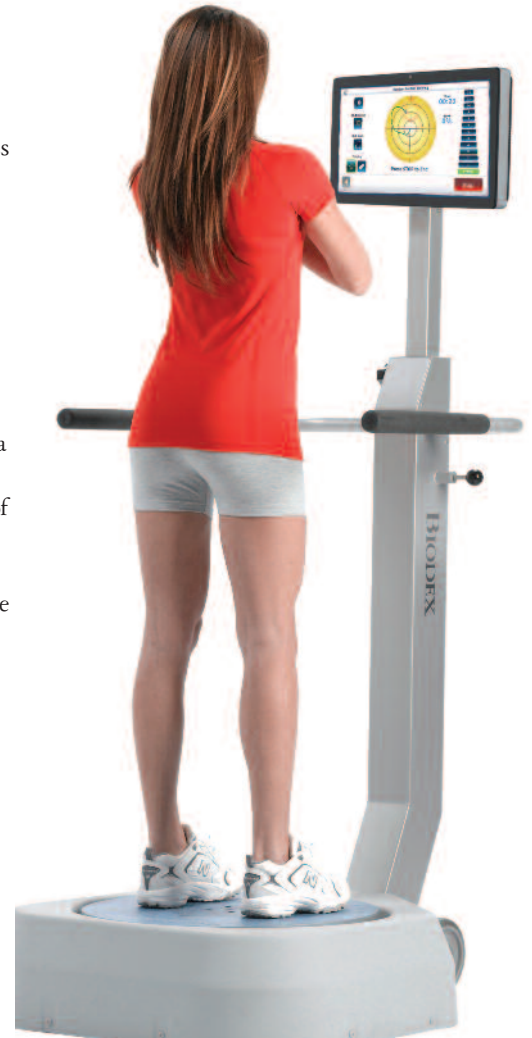
Help athletes perform better by demonstrating functional deficits. The Biodex Balance System documents weakness and challenges patients to improve. The various test modes evaluate the athlete in a static or dynamic environment, then generates objective documentation of the results. Reports include standard deviations of target performance, the percentage of time an athlete stays in a particular quadrant and then compares performance to normative data, built into the system. This allows the objective measures of the athlete to be trained, and then easily reevaluated and assessed to quantify improvement.

## Concussion Management



Biodex Balance Assessment for Concussion Management is used by high school, college, and professional sports teams to unravel the mystery of concussion and to bring together best practices. Biodex Balance Assessment provides a performance baseline against which post-injury performance can be compared, aiding with return-to-play decisions.

*Includes a Marketing Support Program\*.*



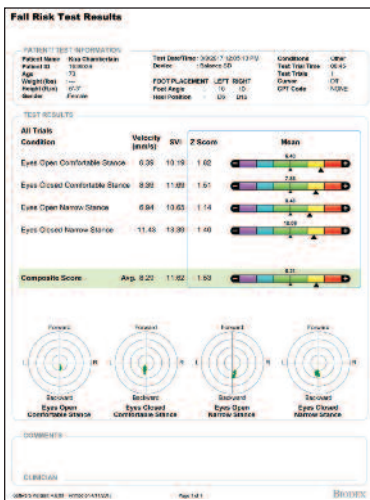
Biodex has partnered with Concussion Health to provide clinical education tools to support best practices in concussion rehab.

[www.biodex.com/concussionhealth](http://www.biodex.com/concussionhealth)



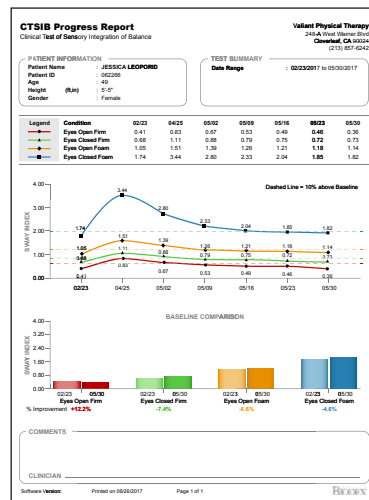
## Balance Testing, Training, Documentation

Objective data proves need, progress and outcome.



### STANDARDIZED FALL RISK SCREENING TEST PROTOCOL –

Biodex Balance System can identify a potential problem in just two minutes. Compares balance test results to age-dependent normative data. Fall Risk Assessment Protocol is consistent with American Geriatrics Guidelines. ICD-10-CM Z91.81 History of Falling includes patients identified as “at risk of falling.”



### CONCUSSION MANAGEMENT

**PROTOCOL –** Preseason baseline testing and post injury return-to-play management using the Clinical Test of Sensory Integration of Balance (mCTSIB).

**BIODEX**

# Balance System SD™

**NEW All-In-One Flat Panel Display**  
15.6" Color Touch Screen, Windows Operating System, Color Printer, USB and Speakers.

*Supports USB keyboard* in all screens for entering text and numerics.

*Auxiliary Serial and USB Printer Ports*

*Adjust display height to accommodate each patient*

*Adjustable support handles*

*Color printer with stand - included*

*Features both static and dynamic balance capabilities*

*Locking surface ensures safe "on-off" patient movement*

*Transport wheels allow easy relocation*

Wireless printer connection also available.



**Safety Step Stool (optional)** – the non-slip surface assures stability and patient safety.



**CTSIB Indexed Pad (included)** – standardizes foot positioning for improved consistency and result comparisons.



**CTSIB** - The CTSIB test helps determine which sensory system (visual, somatosensory, or vestibular) the patient relies on to maintain balance.



## NEW VibroTactile™ System

Providing real-time biofeedback during rehabilitation is essential for patients and clinicians. While audio and visual biofeedback are inherent to the Biodex Balance System™ SD and portable BioSway™, the optional VibroTactile System offers an additional form of sensory feedback to help detect changes in postural sway. Using wireless technology, the tactile belt responds with a vibrating sensation when the patient sways outside the therapist-set parameters.

### Vestibular Therapy

Especially suited for evaluation and treatment of vestibular disorders, vibrotactile cueing allows patients to safely receive positional feedback with their eyes closed.

Vestibular therapy includes balance retraining exercises which, when coupled with vibrotactile feedback as one of the interventions provided by physical therapists, has been shown to improve postural control.<sup>1</sup>



*Vibrotactile cueing allows patients to get positional feedback with their eyes closed.*

### APPLICATIONS

**Vestibular therapies**

**Balance anxieties from TBI**

**Stroke**

**Peripheral neuropathies**

**Amputation**



*“Finally, a means to provide balance feedback with eyes closed.”*

### SPECIFICATIONS:

- Dimensions:  
Base: 30" w x 44" depth x 8" h (76 x 112 x 20 cm)  
Platform: 21.5" diameter (55 cm)
- All-In-One Flat Panel Display: 15.6" Color Touch Screen, Windows Operating System, Color Printer, USB and Speakers.  
Angle: Adjustable from vertical back to approximately 99°
- Display Height: Adjustable from 50" to 65" h above platform (127 x 165 cm); 74" h (188 cm) maximum from floor.
- Stability Levels: 12 dynamic levels, plus locked for static measurements
- Platform Tilt: 20° from horizontal in all directions
- Support Rails: Adjustable from 25" to 36.5" above platform (64 to 93 cm). Rails can swing away from platform when not in use.
- Printer: HP DeskJet
- Printer Stand: 24" x 24" (61 x 61 cm)
- Patient Capacity: 400 lb (136 kg)
- Weight: 196 lb (89 kg)
- Power: 115 VAC, 50/60 Hz, 15 amp line or 230 VAC, 50/60 Hz, 15 amp line
- Power Rating: 350 watts
- Certification: ETL listed to UL 60601-1 and CAN/CSA C22.2 No.:601.1.M90. CE conformity to EN 60601-1, EMC compliance to EN 60601-1-2.
- Warranty: Two-years parts; one-year labor



**950-440** Balance System SD,  
15.6" Display, 115 VAC  
Includes: Printer, printer stand and  
CTSIB Indexed Pad.

Export models available.

### Resources Included

- **NEW eLearning Tutorials** for increased product utilization.
- **Marketing Support** for Fall Risk Screening & Conditioning Program.
- **Marketing Support** for Balance Assessment for Concussion Management.
- **Marketing Support** for Peripheral Neuropathy.

### Optional

- 950-430** VibroTactile™ System  
Includes: Transmitter, two tactile  
belts (S/M and L/XL), each with  
wireless receiver and connection cables.
- 950-306** Step Stool, Balance System SD

**ATTENTION** Existing Balance System SD Customers:  
Display and Software Upgrades are available.  
Contact Biodex Customer Service for details.



## PEER PERSPECTIVE



"I have been using the Biodex VibroTactile System for some time now. It is showing to be a useful tool to improve weight shifting, as well as provide feedback about postural sway. When reaching targets through the hips, tactile stimulation provides positive feedback and vibratory cues that can result in more successful outcomes than verbal cues. With our patients that have notable anxiety about sway (especially when their eyes are closed), it provides the invaluable information that they are actually quite stable – even when they perceive their sway to be great. Clinicians that work with patients with anxiety during sensory conflict – or even with normal sway – will appreciate the clinical application."

Bridgett Wallace, PT, DPT  
360 Balance & Hearing, Austin, TX

[www.biodex.com/vibrotactile](http://www.biodex.com/vibrotactile)

1. Whitney SL, Alghwiri A, Alghadir A. (2015). Physical therapy for persons with vestibular disorders. Pubmed.gov, 61-8. doi: 10.1097/WCO.0000000000000162.



*Static and dynamic balance testing  
and training - for athletes to older adults.*

**[www.biodex.com/balance](http://www.biodex.com/balance)**

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