

"The Clinical Advantage"™

**NEW**

# Balance System™ SD



## Static & Dynamic 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 FreeSway Handles**

Floating handles provide security without impeding balance recovery.

**BIODEX**

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

Int'l 631-924-9000

# Balance System SD™

## FEATURES



NEW 15.6" touchscreen display

- **Static and Dynamic (SD)** – Offers 12 levels of platform control as well as static force setting.
- **Balance Training** – Includes proprioception, stabilization, range of motion and weight shift exercises.
- **Fall Risk Screening Test Protocol** – Standardized protocol that compares balance test results to age-dependent normative data.
- **Software and Larger Display** – Intuitive navigation, 15.6" touchscreen display for improved user experience. Accommodates external keyboard and mouse.
- **Microsoft SQL Database** – Allows clinician 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.
- **Custom Reporting** – Allows entry of unique comments to test results and assignment of CPT codes.
- **Concussion Management Protocol** – For preseason baseline testing and post-injury return-to-play management. Compare to age-dependent normative data using modified Clinical Test for Sensory Integration of Balance (mCTSIB).
- **Normative Data** – Healthy populations stored for test comparison of older adults for fall screening and student athletes for concussion management.
- **Audio/Visual Biofeedback** – Motivates patient by prompting proper balance control in real-time. Allows clinician to easily monitor patient during interactive testing/training.
- **NEW Games for Balance** – Single- and dual-task gaming options to stimulate and motivate postural improvements and enhance patient engagement.
- **NEW Recovery Rapids Game** – River rapids adventure from Games That Move You, co-developed by patient partners and neurorehabilitation researchers.

- **Vibrotactile Feedback** – Enhanced biofeedback for Biodex balance technology. *Learn more about the VibroTactile System, page 6.*
- **Multipurpose Connectivity** – Allows connection to larger monitors and projectors to enhance interaction for visually impaired patients.
- **Adjustable Support Handles** – Lock in place for safety or swing away for an unobstructed, open environment during a variety of training activities.
- **NEW FreeSway Handles** – Floating handles provide security without impeding balance recovery.
- **Locking Surface** – Helps ensure patient safety while moving on or off platform.
- **Mobility** – Transport wheels allow easy relocation between clinic and community for fall screening programs and health fairs.

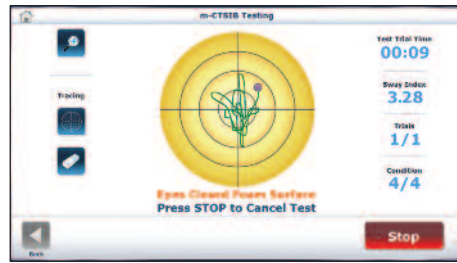


**Prove Need. Progress. Outcome** – All test results and training sessions can be stored and printed. Comparison to normative data helps communicate need, progress and outcome.

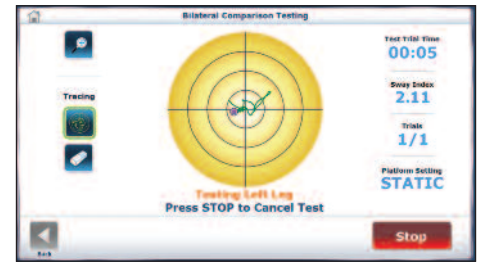
## Testing Modes: Interactive, Static and Dynamic



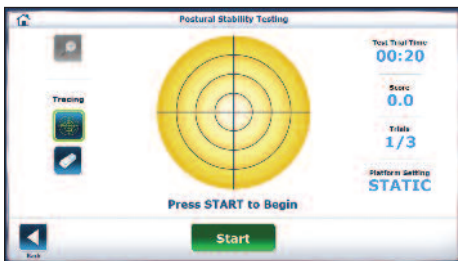
**FALL RISK** – Measures and compares sway velocity against normative data to predict risk. The sway velocity index is derived from velocity and patient height.



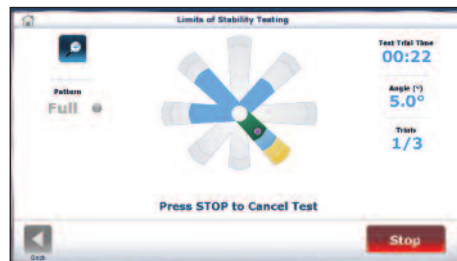
**SENSORY INTEGRATION** – Includes the mCTSIB test, the BESS test and the ability to create custom sensory integration and balance tests.



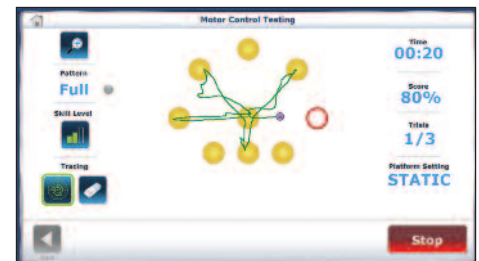
**BILATERAL COMPARISON** – Measures and compares the stability of one leg to the other, used primarily for testing orthopedic injuries.



**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.

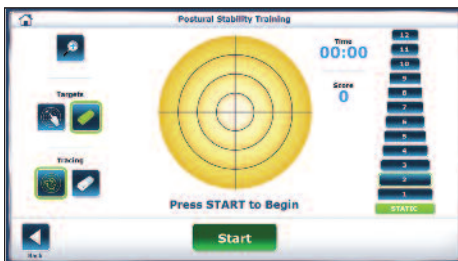


**LIMITS OF STABILITY** – Determines how far a patient can sway with no preset distance required. The angle of sway is a predetermined standard.

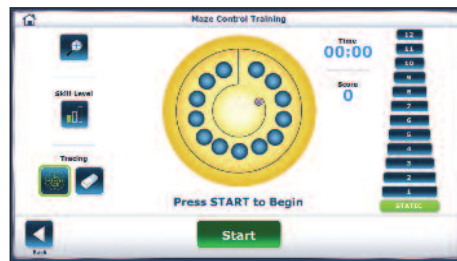


**MOTOR CONTROL** – Shift weight to move the cursor from center – to a blinking target – and back to center quickly with as little deviation as possible.

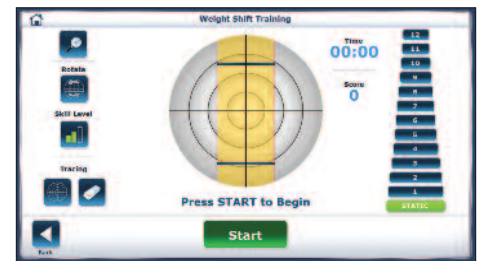
## Training Modes: Interactive, Static and Dynamic



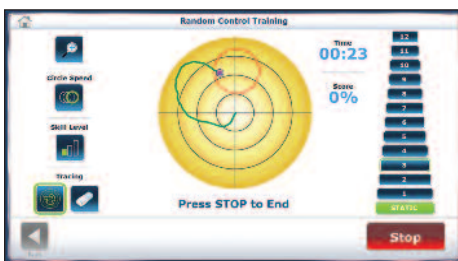
**POSTURAL STABILITY** – Emphasize specific movement patterns or strategies by placing marker anywhere on the screen. Score reflects how many times a target is hit.



**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



## EXPAND YOUR PRACTICE

### Treat More Patients with Biodex Programs

Biodex Balance System SD owners acquire more than an advanced technology solution. Your purchase comes with added value of turnkey programs – science-based technology solutions help your practice address the needs of Older Adult, Sports Medicine, Orthopedic and Neurorehabilitation.

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

## 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)

## 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.

The **NEW** FreeSway Handles let older patients safely learn to control their postural sway under various conditions – for example, on unstable surfaces or with eyes closed. Patients feel safe, but without the restriction of fixed support.

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 ACOs.

## 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.

Co-developed by patient partners and neurorehabilitation researchers, the **NEW** Recovery Rapids game delivers high-repetition massed practice, widely used in stroke therapy.

*Includes a Marketing Support Program\*.*

## Wellness

The Balance System SD is simple to use with an intuitive touchscreen 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.

## 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.

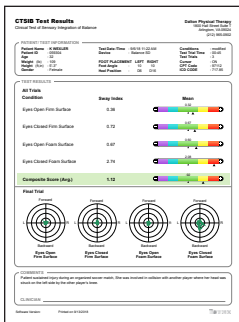
The VibroTactile System provides patients with vibrotactile biofeedback resulting in improved postural control – eliminating the need for subjective verbal and hands-on therapist cueing.

## 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, and 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

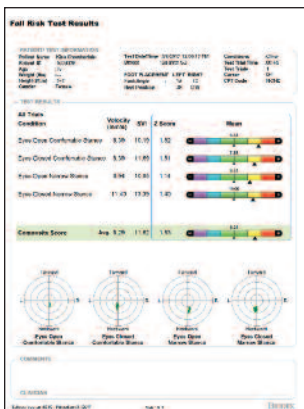


Biodex Balance Assessment for Concussion Management is used by high school, college, and professional sports teams to unravel the mystery of concussion and to bring together best practices. Biodex Balance Assessment provides a performance baseline against which post-injury performance can be compared,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

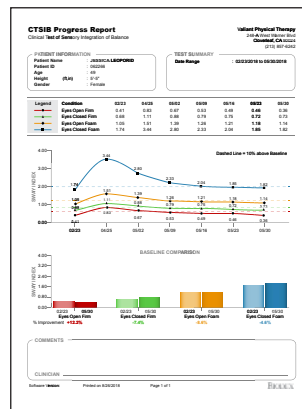
*Includes a Marketing Support Program\*.*

## Balance Testing, Training, Documentation

Objective data proves need, progress and outcome.



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



# Consider the Possibilities

## Optional Enhancements for the Balance System SD

### NEW FreeSway Handles



It is widely accepted that patients should avoid holding on in order to reap full functional benefits of balance training. The FreeSway Handles are the only balance training option that allows patients to experience unimpeded postural sway – while holding on. Think of the FreeSway Handles as training wheels for balance. The handles “float” securely within support rings that catch the handles if a patient sways too far or loses their balance. Patients will progressively gain an understanding of their sway envelope, which will carry over into everyday activities.



*Handles “float” to provide security without impeding balance recovery.*

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



### NEW Games for Balance

Games are increasingly used in rehab therapy to motivate patients of all ages, and drive better outcomes. Gaming options for the Balance System SD help encourage postural improvements.

#### Included Balance Games

Choose from single- and dual-task gaming options – free with the Balance System SD.

#### SINGLE TASK = BALANCE CONTROL



*Catch Game*

#### DUAL TASK = COGNITIVE + MOTOR



*Ball Maze*



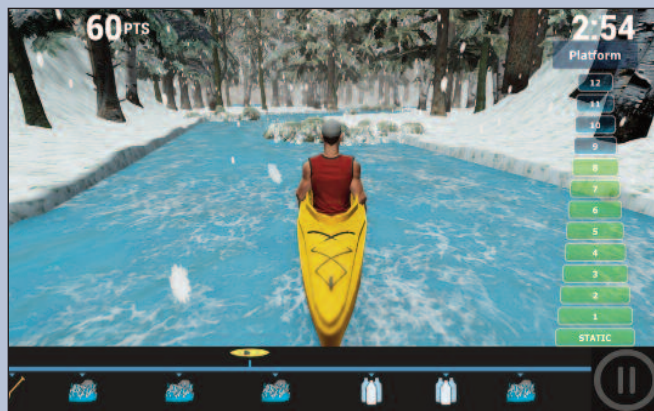
*Word Search*

### NEW Recovery Rapids

Deliver high-repetition balance training with Recovery Rapids – a river rapids adventure game from Games That Move You. Co-developed by patient partners and neurorehabilitation researchers, Recovery Rapids takes Biodex balance training to the next level.



- Encourage carryover of motor gains to daily activities
- Promotes high-repetition massed practice
- Keep patients exercising
- Improve overall client satisfaction



*Power a boat downstream, steer around bends, collect items and avoid obstacles – all through weight-shifting on the Balance System SD platform.*

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

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

*Adjustable support handles*

*Auxiliary Serial and USB Printer Ports*

*Adjust display height* to accommodate each patient

*Features both static and dynamic balance capabilities*

*Transport wheels* allow easy relocation

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

*Color printer with stand* - included



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.

## SPECIFICATIONS:

- Dimensions:  
Base: 26" w x 37" depth x 8" h (66 x 94 x 20 cm)  
Platform: 21.5" diameter (55 cm)
- All-In-One Flat Panel Display: 15.6" Color Touchscreen, Windows Operating System, Ethernet, USB, Video/Audio Out, Built-In Speakers and Color Printer. Bolsters connectivity options to other devices, enabling remote operation for data transfer and software upgrades.
- Display Height: Adjustable from 46" - 60" (117 - 152 cm) from center of display to platform
- Stability Levels: 12 dynamic levels, plus locked for static measurements
- Platform Tilt: 20° from horizontal in all directions
- Support Handles: Adjustable from 26" - 36" above platform (66 - 91 cm). Handles can be removed when not in use or interchanged with the optional FreeSway Handles.
- User Capacity: 60 - 400 lb (27 - 182 kg)
- Weight: 235 lb (107 kg)
- Printer: HP DeskJet
- Printer Stand: 24" x 24" (61 x 61 cm)
- Power: 115 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

- [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.*
- 950-450** FreeSway Handles
- 950-451** Recovery Rapids Game
- 950-306** Step Stool

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

**DESIGN YOUR VISION.**  
**Biodesx Floor Plan Software**  
lets you make the space your own.  
**Create. Share. Save.**  
[www.biodesx.com/planner/pm](http://www.biodesx.com/planner/pm)

# BIODEX

The logo features a dark blue, curved swoosh that starts on the left and ends on the right, partially enclosing the text. The text "Balance System™ SD" is written in a black, serif font, with "SD" in a larger, bold font weight.

Balance System™ SD

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

**BIODEX**  
Biodex Medical Systems, Inc.

20 Ramsey Road, Shirley, New York, 11967-4704, Tel: 800-224-6339 (Int'l 631-924-9000), Fax: 631-924-9241, Email: [info@biodex.com](mailto:info@biodex.com), [www.biodex.com](http://www.biodex.com)

