

# Reactive Step Trainer (RST)<sup>™</sup>

PRACTICE MAKES.....PROVEN FALL RISK REDUCTION

**Because you want to reduce falls for patients at risk:**

- Perturbation based balance reeducation
- Designed to improve neuroplasticity
- Learned compensatory step strategies
- PT customized protocol (speed, time, intensity)
- Random or “on-demand” perturbation challenges
- Repetitive therapy (up to 20 minute pre-selected intervals)



**Reactive Step Trainer**

Large Monitor and  
Versatile Software

**BIODEX Rehab**

[www.biodexrehab.com](http://www.biodexrehab.com)

1-800-224-6339  
Int'l 631-924-9000

*“The Clinical Advantage”<sup>™</sup>*

# Reactive Step Trainer™ One Device - Four Functions

Balance reeducation device

Gait trainer (post-surgical or neurological gait improvement)

Award winning music therapy (proven syncopated gait improvement)

Physical therapy centric treadmill (forward, reverse, low-speed increments 0.1 mph)

**\* RST provides therapists with the full suite of services offered on our current GT3 plus the benefits of balance reeducation (RST must be used with Unweighing System)**



*"I need a device that provides audio and visual biofeedback of step length and step speed."*



**Printer and Printer Stand Included** allows for printing of progress reports and patient information.

 Visit our website to view product video

# Continuous practice helps patients improve their balance and reduce their risk of falling

## OBJECTIVE DOCUMENTATION:

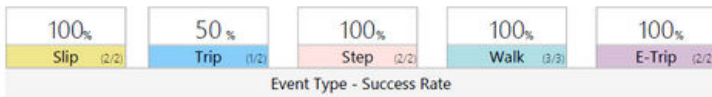
## FEATURES:

### Output measurement sample reports

#### Reactive Step Training Results

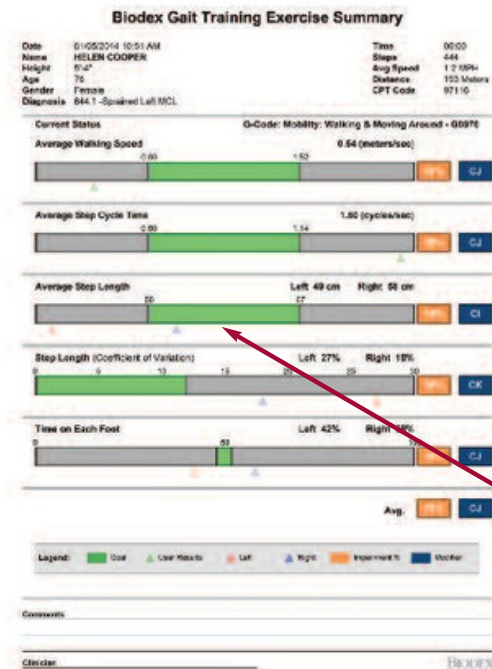
Test Date / Time : 5/9/2024 8:30:21

#### TEST SUMMARY



#### TEST RESULTS

	Event Type	Level	Speed (MPH)	Score
1.	Trunk Stability Slip	2	-	Pass
2.	Walk Stability	5	1.5	Pass
3.	E-Trip	1	1.1	Pass
4.	Trunk Stability Trip	3	-	Fail
5.	Step Stability	4	-	Pass
6.	Trunk Stability Slip	2	-	Pass
7.	E-Trip	1	1.1	Pass
8.	Walk Stability	5	1.5	Pass
9.	Step Stability	4	-	Pass
10.	Trunk Stability Trip	3	-	Pass
11.	Walk Stability	5	1.5	Pass

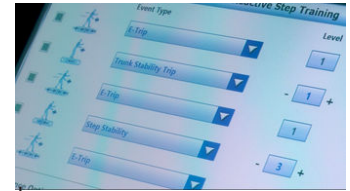


Normal ranges shown in green

#### Progress Report:

Perfect for showing need  
Progress and outcome for specific gait parameters

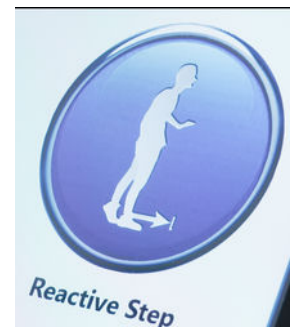
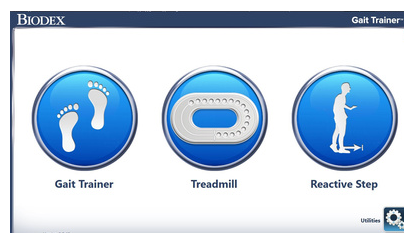
- **Five types of perturbations** - Trunk Stability Slip & Trip, Step & Walk Stability, and e-Trip – to improve step recovery and dynamic balance and thereby reduce the incidence of falling.
- **Instrumented Deck**– The Reactive Step Trainer™ is the only treadmill with an instrumented deck that monitors and records step length, step speed and right-to-left time distribution (step symmetry).



- **Open Platform**– enables patient access for therapist manipulations and accommodates BWSTT with the Biodex Rehab Unweighing System.
- **Objective Documentation**– Ideal for insurance reimbursement. Exercise Summary and Progress Reports display progress and document outcomes for specific gait parameters, including:
  - Average walking speed over time
  - Total exercise time
  - Total distance and steps taken
  - Average step length: RT vs. LT
  - Step length variability: RT vs. LT
  - Time on each foot: RT vs. LT

- **NEW Automated G-code Calculations and Impairment Level Reports**– Increases efficiency and productivity, improves documentation of rehab effectiveness fostering continuity of care, helps with audits, efficiencies and reduces claims denial.
- **Normative Data**– Age- and gender-based for comparison to healthy populations for assessment of patient results.
- **Audio and Visual Biofeedback**– Motivates patients with real-time biofeedback, prompting proper gait patterns. Biofeedback help patients stay “on target” in each phase of rehabilitation; steps lengthen, step speed increases and symmetry improves.
- **Heart Rate Monitoring**– Polar® contact handgrips (telemetry compatible) ensures proper training intensity.
- **Large Display**– Features 12.1" color touch-screen display, powered by a Windows CE operating system.
- **Multipurpose Connectivity**– Allows connection to larger monitors and LCD projectors to enhance interaction for visually impaired patients.
- **USB Compatibility**– Accommodates external keyboard, a mouse, printing devices for remote operation and USB memory devices for data transfer and software upgrades.

### Selection modes



**BIODEX Rehab**

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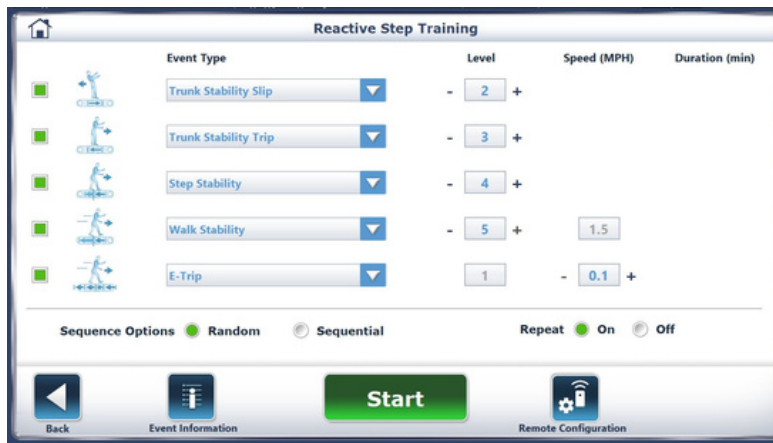
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# Five clinical applications for slip and trip challenges with customizable intensity levels

## APPLICATIONS

**Goal:** To improve step recovery and dynamic balance and thereby reduce the incidence of falling

- Older Adult
- Orthopedic Patients
- Stroke/Traumatic Brain Injury
- Spinal Cord Injury
- Amputation of a Lower Extremity
- Parkinson's Disease
- Neurologic Patients
- Vestibular Patients



## SPECIFICATIONS:



950-600 Includes Standard Handrails



The RST shown in use with the Biodex Unweighing System.

- Dimensions: 86" l x 27" w (218 x 69 cm)
- Walking Area: 64" l x 20" w (160 x 51 cm)
- Printer Stand: 24" l x 24" w (61 x 61 cm)
- Deck: 1" thick (2.5 cm) reversible Teflon™ impregnated high density composite fiber
- Motor: 2 HP with 2Q-Pulse Width Modulation Control
- Speed Range:
  - Forward: 0-10 mph (0-16 km/h)
  - Reverse: 0-3 mph (0-4.8 km/h) in 0.1 mph (.16 km/h) increments
- Gait Trainer Speed Range: .3 - 4.5 mph (.48 - 7.2 km/h)
- Elevation: 0-15% Grade
- Heart Rate Monitoring: Polar® contact handgrips (telemetry compatible)
- Display: Color Touch-Screen
- Printer: HP DeskJet
- Power: 115 VAC, 50/60 Hz, 20 AMP dedicated line. Includes hospital grade plug with 12' (3.7 m) power cord.
- Patient Capacity: 400 lb (182 kg)
- Weight: 395 lb (179 kg)
- Certification:
  - ANSI/AAMI ES60601-1:2005 + A1:2012 + C1:2009 and A2:2010
  - CAN/CSA-C22.2 No. 60601-1:14. IEC 60601-1:2012
  - EN 60601-1:2006/A1:2013 (CE) and IEC 60601-1:2005/A1:2012 (IEC)
  - Test to EMC Standard EN 60601-1-2:2015 and IEC 60601-1-2:2014
- Warranty: Two-years parts; one-year labor

950-600 Reactive Step Trainer™  
50/60 Hz 115 VAC\*  
Includes Support Bar

950-485 NxStep Unweighing system™  
sold separately

## Time / Velocity charts of the five clinical applications of the RST

		Level 1	Level 2	Level 3
	Duration (msec)	100	150	190
Maximum Velocity (cm/s <sup>2</sup> )	37	55	70	

Trunk Stability Trip

		Level 1	Level 2	Level 3
	Duration (msec)	100	120	100
Maximum Velocity (cm/s <sup>2</sup> )	-24	-41	-72	

Trunk Stability Slip

		Level 1	Level 2	Level 3
	Duration (msec)	500	500	500
Maximum Velocity (cm/s <sup>2</sup> )	31	48	67	

Step Stability

		Level 1
	Duration (msec)	565
Maximum Velocity (cm/s <sup>2</sup> )	112	

E-Trip

		Level 1	Level 2	Level 3
	Duration (msec)	500	500	500
Maximum Velocity (cm/s <sup>2</sup> )	31	48	67	

Walk Stability

# BIODEX Rehab

Biodex Medical Systems, Inc. Part of Evome Medical Technologies

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