

# Available Tests

TEST	I-Portal® NOTC Standard Version	I-Portal® NOTC Professional & Clinical Versions	I-Portal® NOTC Clinical with Off Vertical Axis Rotation	I-Portal® SVNG*	I-Portal® VOG-B100*
Spontaneous Nystagmus (CPT 92541)	X	X	X	X	
Gaze Nystagmus Vertical and Horizontal	X	X	X	X	
Saccade Vertical and Horizontal	X	X	X	X	
Full Field Optokinetic (CPT 92544)	X	X	X	X	
Smooth Pursuit (CPT 92546) Vertical and Horizontal	X	X	X	X	
Subjective Visual Vertical and Horizontal	X	X	X	X	
Visual (Suppression, Interaction, Enhancement)	X	X	X		
Chair Trapezoidal (Step Test)	X	X	X		
Sinusoidal Harmonic Rotation (Chair Sine) (CPT 92546)	X	X	X		
Full Body Head Thrust	X	X	X		
Dynamic Unilateral Centrifugation with SVV		X	X		
Dynamic Off Vertical Axis Rotation**			X		
mTBI / Concussion Research Module**	X	X	X	X	
Caloric (CPT 92543)				X	X
Positionals (CPT 92542)				X	X
Positioning (Dix-Hallpike)				X	X
Custom (e.g. Torsion Observation and Analysis)	X	X	X	X	X

\*I-Portal®-SVNG and VOG-B100 modules not included in NOTC packages.

\*\*For research purposes only; not cleared for clinical use.

## Support and Training

### Service Support

- Web enabled assistance for live, interactive help.
- High quality technical and clinical service team.

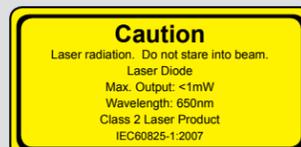
### Training

- Multiple training offerings including both basic equipment use and research level applications.



**Neuro Kinetics, Inc.**

128 Gamma Drive  
Pittsburgh, PA 15238  
(412) 963-6649  
www.neuro-kinetics.com

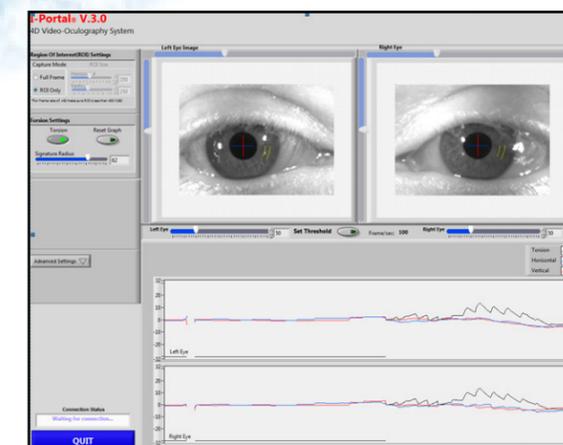


**Neuro Kinetics, Inc.**

## I-Portal® Neuro-Otologic Test Center with VEST™ Operating and Analysis Software

### No One Offers More

- Modular and upgradable
- Full battery of VNG oculomotor tests
- Full field OPK
- True smooth pursuit
- Torsional eye data
- Utricle diagnosis in infants
- Bariatric patients up to 400 lbs.
- Repeatable, measureable full body head thrust test



# NOTC Configurations

## NOTC Standard

Standard single axis clinical testing system.

- 185 ft. lb. Rotary Motion Stimulus
- Light Tight Enclosure with Patient Monitoring
- Dual Axis Pursuit Tracker® Oculomotor Stimulus
- Full Field Optokinetic Stimulus
- I-Portal® 100 Hz Binocular VOG Goggle
- High speed operating computer with flat panel LCDs

## NOTC Professional

NOTC Standard plus Dynamic Unilateral Centrifugation and Subjective Visual Vertical and Horizontal tests.

- Dynamic Unilateral Centrifugation separately tests left vs. right otolith function at level of vestibular cortex and otolith-ocular response.
- Dynamic axis eliminates manual setup and maximizes patient comfort.
- Subjective Visual Vertical and Horizontal provide interactive and easy evaluation of utricle function.

## NOTC Clinical

NOTC Professional with 365 ft. lb. motor upgrade.

- Accurately test 400 lb. patients up to 2.5 Hz.
- Allows for addition of Off Vertical Axis Rotation (OVAR), Full Body Head Thrust, and Parent/Child, (additions not included).

## Options

### Eye Tracking

- Binocular/monocular goggles and EOG available.

### Dynamic Off Vertical Axis Rotation (OVAR)

- Evaluation of both otolith organs.
- Allows for otolith testing in infants/children and difficult to test populations.
- Research purposes only; not cleared for clinical use

### Parent / Child System

- Enables small infant testing on axis.

### Full Body Head Thrust Test

- Unpredictable stimulus for higher test accuracy.
- Evaluation of right and left VOR function.
- Measureable and repeatable.

### Caloric Irrigator

- Air or water with computer controlled temperature, flow rate, and timing.

# System Hardware

## Dynamic Vestibular Assembly

Designed for maximum patient comfort.

- Patented direct drive motor accurately tests patients up to 400 lbs. at up to 1.28Hz. (2.5Hz with motor upgrade) US Pat. No. 7,199,471.
- Servo motor control with high resolution encoder creates precise motion profiles.
- Fiber optic slip ring passes noise free eye data.
- Adjustable fore-aft position puts patient on axis for accurate and comfortable testing.

## Light Tight Enclosure

Enclosed testing environment isolates patient.

- No visual or sound cues ensure accurate test results.
- Infrared video to monitor patient alertness and comfort.
- Hands free intercom provides ear level sound with adjustable amplification for the hearing impaired.

## Oculomotor Stimuli

Patent pending Pursuit Tracker™ laser diode system and Optokinetic sphere.

- Pursuit Tracker™ provides true smooth pursuit testing. Independent horizontal and vertical control allows for virtually unlimited test protocols.
- Optokinetic sphere projects full field light pattern required for true OPK system evaluation.



## I-Portal® 100 Hz VOG Goggle

Patented digital eye tracking with real time analysis.

- Provides 4D tracking: torsional, horizontal, vertical, and pupilometry measurements.
- High frame rate to accurately capture saccades.
- Light weight for exceptional patient comfort and accurate testing at high chair frequencies.
- US Patent No. 7,448,751; 7,520,614; 7,651,224; 7,665,845; 7,731,360; 7,753,523; and 7,866,818; other patents pending.

# VEST™ Neuro-Otologic Analysis Software

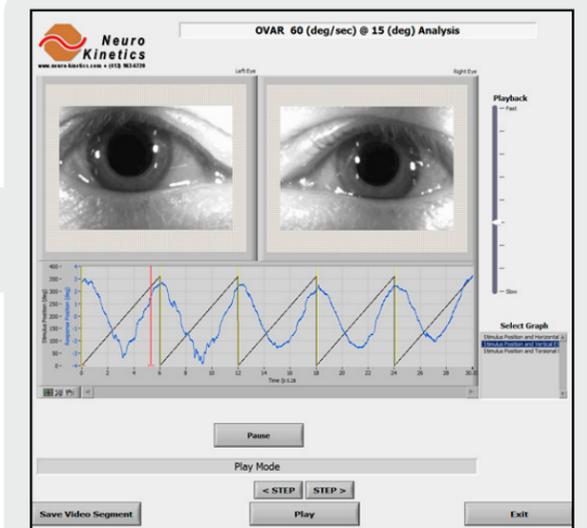
VEST™ neuro-otologic analysis software offers a visual, easy to use interface. All tests are built into one software platform, eliminating the need to learn multiple software packages.

- Clinical utility with research level power to create protocols and custom tests.
- Clinical speed and ease of use for quick patient evaluation and accurate analysis.
- Real time binocular data and stimulus feedback including video image with no lag time.
- Separate examiner and administration privileges with password protection.

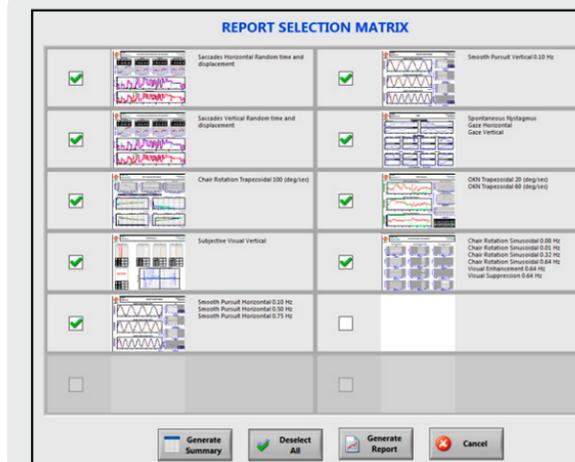
### New enhancements for VEST™ 7.0 and I-Portal® 3.0 include:

- Platform using single PC with Windows® 7 provides the increased performance and efficiency of the new 64-bit operating system.
- New report structure and selection matrix provides an intuitive and enhanced user interface to streamline patient report documentation.
- Video saving and playback now added for NOTC tests with enhanced video compression allowing 10x smaller files.
- Improved performance of pupil detection and torsion algorithms with torsion now running at 100 hz.
- Platform for mTBI/concussion research tests (research only; not for clinical use).

Video recording and playback with frame by frame control now available for NOTC tests.



New report selection matrix makes it easy to print a summary or select test grouping.



New reporting format provides enhanced organization and presentation of patient data.

