

VNG

Balance Testing



VN415 / VO425
- Complete solutions



Interacoustics®

leading diagnostic solutions

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Balance Testing with FireWire® VNG

Video Nystagmography is the “gold standard” for observation, measurement and analysis of eye movements in the evaluation, management and treatment of dizziness and balance disorders. The sleek FireWire® design delivers high speed and accurate data which is analyzed in real time and graphically displayed instantly to allow quick interpretations of abnormalities.



Interacoustics offers two VNG solutions:

VO425

- *FireWire® Speed and Accuracy*
- *Reduced Test Time, 30 minutes*
- *Full-Field Visual Stimulation*

- VN415 is the basic VNG platform with standard protocols for Spontaneous Nystagmus, Bithermal Caloric, Positional and Dix-Hallpike testing and is delivered in a monocular camera configuration.
- VO425 is an advanced VNG platform with binocular cameras. VO425 offers the same test protocols as VN415 and additionally expands into oculomotor tests with standard protocols for Gaze, Saccade, Smooth Pursuit and Optokinetic testing.

The Combi Goggle

The VO425/VN415 FireWire® VNG system comes equipped with the industry's leading goggle design.

The Combi goggle is light weight with a direct FireWire® connection to a laptop or desktop computer. It has an easy fitting magnetic cover to allow for measurements both with vision and with vision denied, and a built-in fixation light to simplify testing. With adjustable mirrors and vertical, horizontal and focus adjustments for each camera, the fit is ideal for all patients, regardless of skull size.

The disposable foam cushions allow for a sanitary solution for each patient and provide a comfortable, secure and light-tight fit.



Combi goggle

- *Light Weight and Comfortable*
- *Direct FireWire® Connection*
- *Replaceable Foam Cushions*
- *Adjustable Mirrors and Controls*



How common is dizziness and imbalance?

According to the National Institute of Health "Over 90 million Americans, age 17 and older, have experienced a dizziness or balance problem."

Dizziness occurs in approximately 1.8 percent of young adults and more than 30 percent of the elderly. Every year, one-half of the population age 65 and over experience falls.

As stated by the Vestibular Disorders Association, children can experience the same vestibular disorders as adults.

Benign paroxysmal positional vertigo (BPPV) in children is typically associated with physical trauma and can result from accidents, falls, or sports injuries. BPPV has also been observed following cochlear implantation. Vestibular neuritis or labyrinthitis occurs in children, as well as ototoxicity. Children that experience ototoxicity can have severe imbalance, falls, and visual-motor problems, including oscillopsia (bouncing vision).



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VN415 – Vestibular analysis

The VN415 is designed for convenient computer aided analysis of Spontaneous, Positional, Hallpike, Bithermal and Caloric tests. Rapid data transfer technology enables very high quality video and precise measurements with all results stored in the OtoAccess™ database. The system also includes functions for printing reports and sharing data.

Connect and go

VN415 is a completely portable VNG system. There is no bulky equipment to get in the way. Start the software, place the goggles on the patient and you are ready to test.

High quality video and analysis

The VN415 performs real time analysis. Rapid data transfer (105 Hz binocular, 174 Hz monocular) allows much more data to be analysed, giving very precise measurements and outstanding video quality.

User-definable test battery

You can design your own test protocols which can be loaded with a single mouse click.

Remote controlled testings

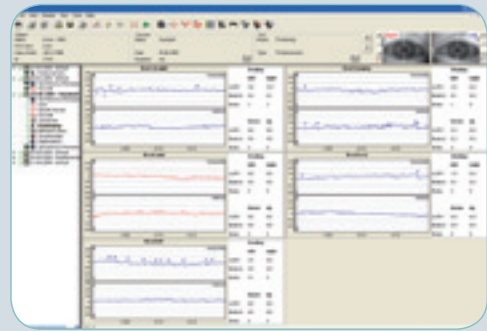
It is possible to step through the tests using a USB connected footswitch.

Video recording

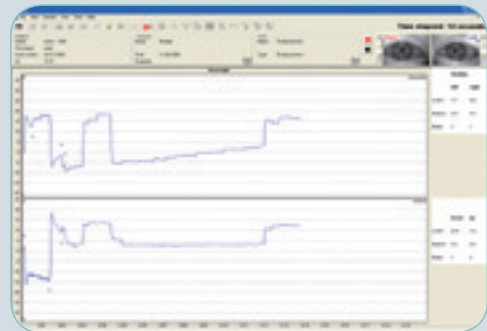
The video from each test can be recorded and stored in full on the associated storage device (typically a hard drive) where it is linked to the results in the database record. The only limit to the size of the recording is the capacity of the recording device.

When the session is reviewed, the recording will be available for replay in normal, fast or slow mode. There is also the option to review the recording one beat at a time.

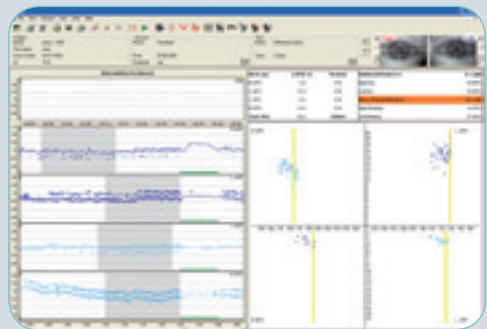
The recording can be exported in AVI format for consultation or teaching purposes. Various sound file formats are available to include sound recording together with the video.



Positional test window



Positional test window
(enlarged during data acquisition)



Caloric Irrigator test window

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VO425 – Vestibular & Oculomotor analysis

The VO425 is designed for clinics that carry out detailed balance evaluations. It provides full-field video stimulation for all tests in the standard dizziness test battery. Rapid data transfer technology enables very high quality video and precise measurements, with all results stored in the OtoAccess™ database. The system also includes functions for printing reports and sharing data.

Software generated ocular stimuli

Full field view visual stimuli are software generated on your laptop or PC and output directly through the included video projector onto a wall or portable screen. The digital stimuli are ideal for both pediatric and adult populations and include several default patterns, for e.g., stripes, chessboards and cartoons for the kids. In addition you can import your own stimuli patterns.

Complete balance testing

Tests include a simple calibration, Spontaneous Nystagmus, Gaze, Tracking, Saccade, Optokinetics, Positional, Hallpike, and Bithermal/monothermal Caloric. You can easily design your own test protocols and load these with a single mouse click.

Automatic or manual analysis

The system produces very accurate measurements, but you can select to manually edit any tests including adding or deleting points and changing the slope values.

Remote controlled testings

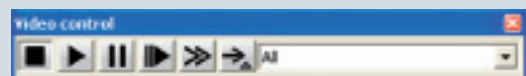
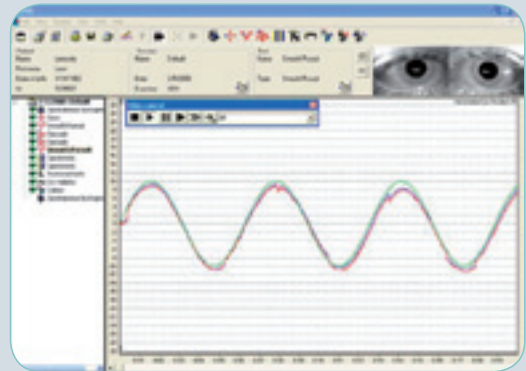
It is possible to step through the tests using a USB connected footswitch.

Sharing results

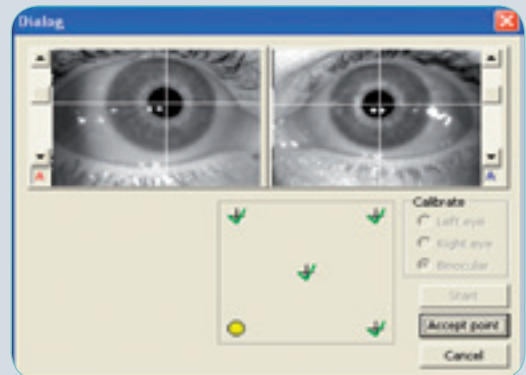
The VO425 is designed to facilitate collaboration. All results are stored in the OtoAccess™ database with abilities for printing detailed color reports. Results and recordings can also be exported for electronic charting purposes.

Video recording

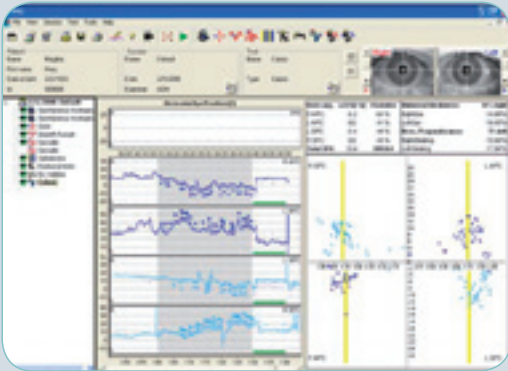
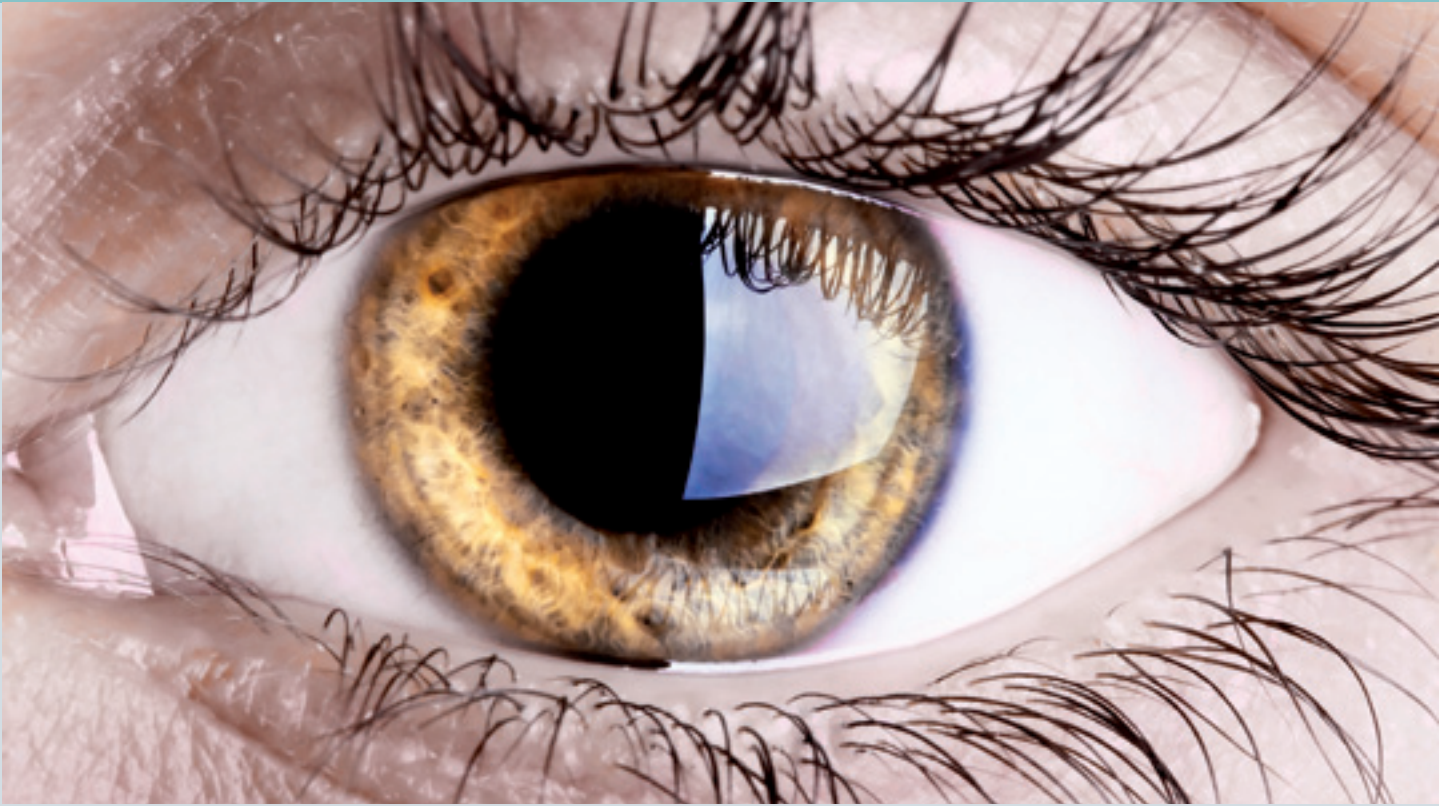
The video from each test can be recorded and stored in full on the associated storage device (typically a hard drive) where it is linked to the results in the database record. The only limit to the size of the recording is the capacity of the recording device. When the session is reviewed, the recording will be available for replay in normal, fast or slow mode. There is also the option to review the recording one beat at a time.



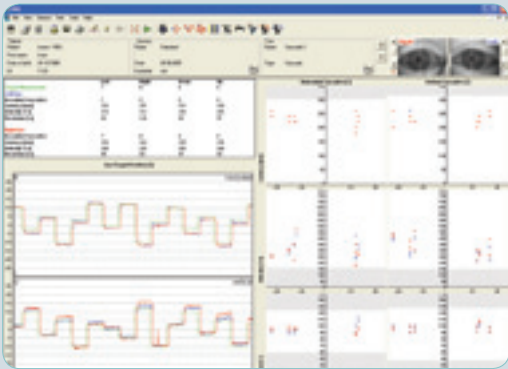
Video playback



Simple calibration



Caloric test window



Saccade test window



USB foot pedal

Time-saving features

- *Fastest Eye Tracking*
- *Automatic Video Adjust*
- *Real Time Analysis*
- *USB Foot pedal*



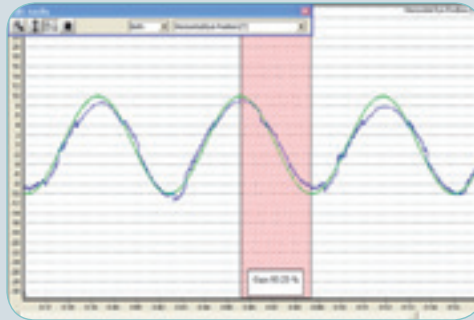
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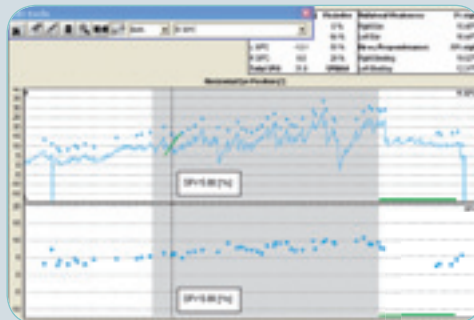
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Editing and data management



Edit tracking test

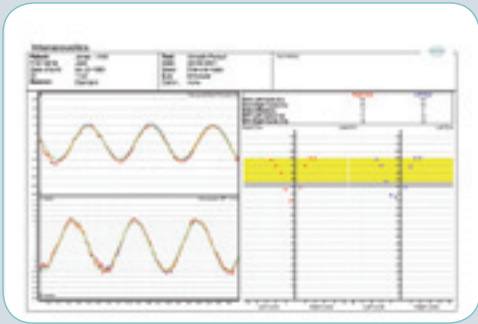


Edit Caloric test

- Export
- Backup
- Email
- Exchange



Examples of printouts



Example of printout of Smooth Pursuit test

A printout of numerical statistical data. It consists of a large table with many columns and rows, containing various numerical values and some text labels. The table is organized into several sections.

Example of printout of numerical statistical data



Read more here:
www.interacoustics-us.com/us/VNG



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VO425 Specifications

Technical Standards:

Camera: IEEE1394 FireWire®

Resolution: 640 x 240 Pixels

Images: 105 images per second binocular, 174 images per second monocular

Safety Standards: EN60601-1 (General Safety), EN60601-1-1 (System Safety), EN60601-1-2 (EMC)

Physical Specifications: Goggle weight with two cameras
305g / 0.7 lbs. (without magnetic cover)
385g / 0.8 lbs. (with magnetic cover)

Dispensing box with 24 pcs. of disposable goggle foam pads
302 x 216 x 131mm / 11.9 x 8.5 x 5.2 inch. (L x W x H)

Tests: Bithermal Caloric Test / monothermal caloric test
Spontaneous Nystagmus Test
Positional Test
Dix-Hallpike Test
Gaze Test
Smooth Pursuit Test (Tracking)
Saccade Test
Optokinetic Test

Included Parts - with desktop: Installation CD
Combi mask with 2 cameras
Disposable combi mask foam cushions - pk. of 24
USB Footpedal
Otoaccess™ database software
Desktop computer, Windows XP, 3 year manufacturer warranty applies
15" flat screen monitor, keyboard, mouse
LCD projector and extension cable, manufacturer warranty applies
Color inkjet printer with USB cable, manufacturer warranty applies
Operation manual
VNG Quick Guide
Warranty card

Included Parts - with laptop: Installation CD
Combi mask with 2 cameras
Disposable combi mask foam cushions - pk. of 24
USB Foot pedal
IEEE 1394a express card with power supply
Otoaccess™ database software
Laptop, 1 year manufacturer warranty applies
LCD projector and extension cable, manufacturer warranty applies
Color inkjet printer with USB cable, manufacturer warranty applies
Operation manual
VNG Quick Guide
Warranty card

Optional Parts: Ceiling mount bracket
Tripod projector screen
Disposable foam cushions (pk. of 24)
Caloric irrigator, air

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VN415 Specifications

Technical Standards:

Camera: IEEE1394 FireWire®

Resolution: 640 x 240 Pixels

Images: 105 or 174 images per second

Safety Standards: IEC 60601-1 (General Safety), IEC 60601-1-1 (System Safety), IEC 60601-1-2 (EMC)

Physical Specifications: Goggle Weight with one camera

- 240g / 0.5 lbs. (non-occluded view)
- 320g / 0.7 lbs. (occluded view)

Dispensing box with 24 pcs. of disposable goggle foam pads
302 x 216 x 131mm / 11.9 x 8.5 x 5.2 inch. (L x W x H)

Tests: Bithermal Caloric Test / Monothermal Caloric Test
Spontaneous Nystagmus Test
Positional Test
Dix-Hallpike Test
Sinusoidal Pendular test (only with rotary chair)
Step Rotation test (only with rotary chair)

Included Parts - with desktop: Installation CD
Combi mask with 1 camera
Disposable combi mask foam pads - pk. of 24
USB Foot pedal
IEEE 1394a express card with power supply
Otoaccess™ database software
Desktop computer, Windows XP, 3 year manufacturer warranty applies
15" flat screen monitor, keyboard, mouse
Color printer
Operation manual
VNG Quick Guide
Warranty card

Included Parts - with laptop: Installation CD
Combi mask with 1 camera
Disposable combi mask foam pads - pk. of 24
USB Foot pedal
IEEE 1394a express card with power supply
Otoaccess™ database software
Laptop, 1 year manufacturer warranty applies
Color printer
Operation manual
VNG Quick Guide
Warranty card

Optional Parts: Disposable foam cushions (pk. of 24)
Caloric irrigator, air

Read more here:
www.interacoustics.com/com/VNG



Interacoustics®

Leading diagnostic solutions

Interacoustics – the best choice

With over 40 years of experience, Interacoustics is dedicated to supplying its customers with the best possible solutions for their audiologic needs. This is accomplished by maintaining a continuous dialogue with healthcare professionals working in all sectors of audiology. Our equipment meets the highest possible engineering standards and we provide design know-how that can only come from close contact with clinical practice.

Solutions on every scale

Designing equipment for every size of clinic in so many countries puts us in the unique position of being able to offer solutions that fit your requirements exactly. Audiometry, tympanometry, electrophysiology, hearing aid testing, and balance investigation are all within our scope and can be integrated to suit your needs.

Design for diagnosis

We design equipment to make testing and interpretation easier. This means better interfaces, well designed screen layouts, printed reports and interaction over networks with databases and electronic records systems. In most cases, you can configure the settings and layout yourself.

Support worldwide

The Interacoustics name is not only your guarantee of quality and functionality, but also for support. We operate in over 100 countries worldwide through a well coordinated network of distributors and service centers to ensure that you receive total support and service.



Products in this group:

- VO425
- VN415
- VF405 Video Frenzel

Related products:

- Eclipse EP



Available with desktop PC or laptop

FireWire and the FireWire symbol are trademarks of Apple Computer, Inc., registered in the U.S. and other countries. The FireWire logo is a trademark of Apple Computer, Inc.

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Read more here:
www.interacoustics-us.com/us/VNG



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