

Subjective Visual Vertical (SVV)

For detection of otolithic dysfunction

The simplest test for otolithic function

The ability to perceive verticality and horizontality not only depends on visual information but also somatosensory and vestibular information.

Many studies show that in most case of otolithic organs lesion, before compensation subjective vertical tilts toward the affected ear. By measuring subjective vertical deviation angle with a precision of 0.1°, SVV test is a simple, fast and reliable examination.

Painless and entertaining test for the patient

Patient wears the Synapsys limited vision field mask (20°) to remove any vertical or horizontal visual reference.

A luminous pattern is projected on the wall using a video projector. Seated on a chair, the patient is instructed to adjust the bar vertically or horizontally with a gamepad.

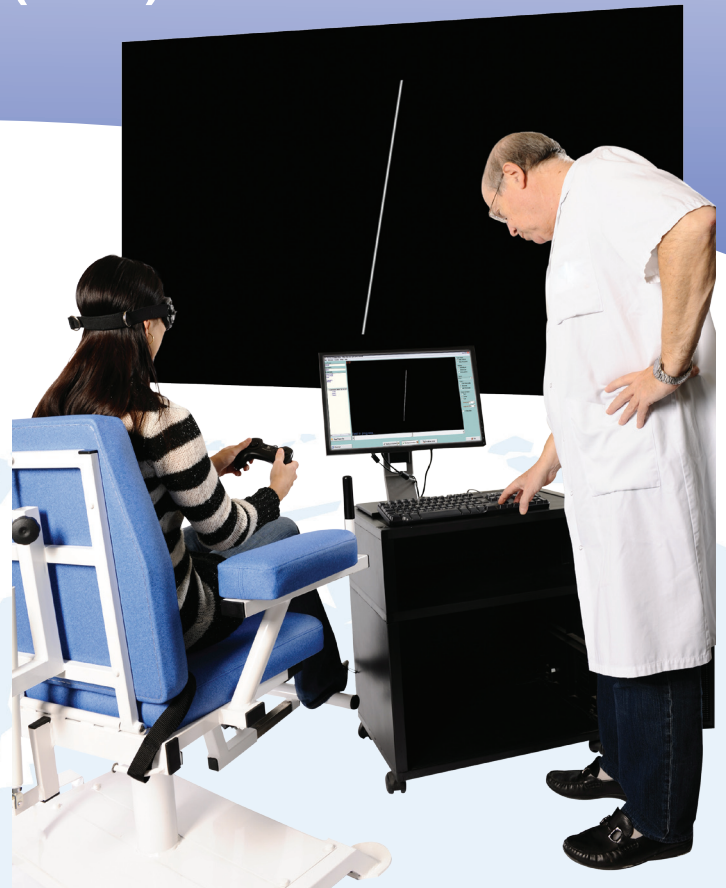
Choices for patterns, colors and deceptive backgrounds allow adapting examination to patient's strategy for vertical perception. Rotating visual backgrounds (optokinetic stimulation) enable Dynamic Visual Vertical test.

Visual and numerical result, easy to interpret

A normal subject presents subjective vertical tilt within a mean error of less than 3° while a patient with an acute lesion may exceed 10°.

The Synapsys Subjective Visual Vertical software calculates and displays the deviation angle between real vertical angle value and patient's perception.

Test repeatability is easy to confirm: Synapsys SVV software guides you along examination procedure and summarizes results on a printout report.



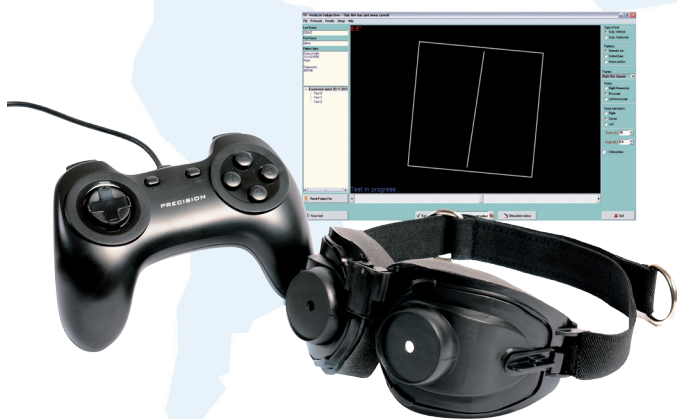
Subjective Visual Vertical in application
- Reliable and rapid tools for otolithic dysfunction diagnostic -

Ideal to complete your vestibular exploration with a very affordable tool

Subjective Vertical goggles integrates Synapsys' goggles specifications for patient's safety and comfort: light, biocompatible, hypoallergenic, full darkness and adjustable field of vision.

Synapsys Subjective Vertical is available as a stand-alone unit with its own patients database or it can be integrated into the VNG Ulmer patient manager. VNG Ulmer users can save time and collect patient's data easily.

The Synapsys Subjective Vertical Kit incorporates decades of experience in balance disorders diagnostic based on specifications established by medical studies.



The Synapsys Subjective Visual Vertical (SVV) Kit:
Subjective vertical software, gamepad and limited vision field mask

Technical Specifications

Subjective Visual Vertical (SVV)

SOFTWARE	Patient manager	Patient and test results saving on a dedicated database or integrated to VNG Patient manager
	Visual stimulation:	
	Display	Video projector, television or video monitor
	Patterns	Line, dot line or triangle (anti-aliasing)
	Backgrounds	Choice of color, picture, predefined patterns (x6), optokinetic stimulation (4 different speeds: +20°/s ; -20°/s ; +40°/s ; -40°/s)
	Available tests	Subjective Visual Vertical Subjective Visual Horizontal Dynamic Visual Vertical and Horizontal (optokinetic background)
	Protocols Parameters	Vision: mono, bi-ocular Pattern zoom Head orientation Pattern choice Multiple Choice of disturbing backgrounds (Fixed or Dynamic) Direction: Horizontal , Vertical
	Results	Visualization, comparison and printing Precision: 0.1°
HARDWARE	Included parts	Restricted vision field mask Gamepad Subjective Vertical Software
	Optional	Wireless remote control Disposable goggles kit
	Spare parts	Replacement foam pads for VNS3X goggles Kit of 3 occluders
	Restricted field of vision mask:	
	Vision Field	20°
	Material	POM and PVC (cushions foams) – certified biocompatible, hypoallergenic and phthalate free
	Weight	50 g / 1.8 oz
	Classification	The Subjective Vertical is a Class II A medical device
	Standard	CE approved / EN 60601-1 / EN 60601-1-2 / EN ISO 9001v2008 / EN ISO 13485v2003
	Minimum computer requirements	OS: Windows XP and Seven 32bits Processor: Pentium III, 1.6 GHz or equivalent Ram: 256 Mo Hard Disk: 40 Go Graphic Board: 2 video outputs to enable Extended mode (Dual view) Recommended Nvidia with minimum 128Mb of memory

Synapsys related products:

- Digital Nystagview (D-VNS)
- VNG Ulmer
- Posturography system (SPS)

Your local partner

For more information:
www.synapsys.fr