

# VISTA<sub>2</sub>

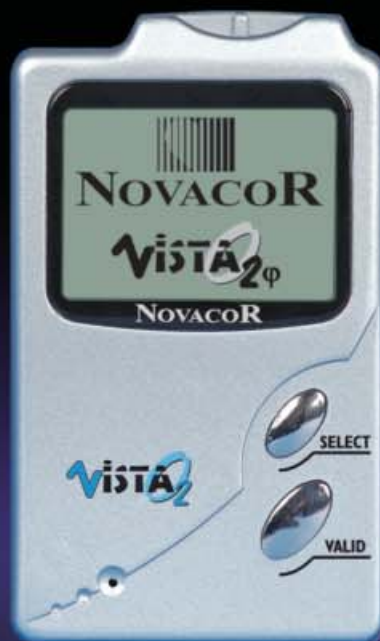


## The Innovation in Holter ECG

  
NOVACOR



## Sleep-Disordered Breathing Diagnosis for the Cardiologist



Actual size

### **SIMPLE:**

- 1 VistaO<sub>2</sub> Recorder
- 1 Flow Sensor
- 1 Flow Sensor ECG Cable
- 5 ECG Electrodes
- 1 Cannula\*
- 1 Wristwatch Oximeter\*

### **COST EFFECTIVE:** Single Holter ECG Procedure

\*Nighttime use only

The 1<sup>ST</sup> HOLTER POLYGRAPH combining  
ECG, OXIMETRY, RESPIRATORY EFFORT & NASAL FLOW



The simplicity of Holter ECG,  
the power of a Polygraph

24 hour  
continuous  
ECG Holter



+

Respiratory signal  
from standard  
ECG cable



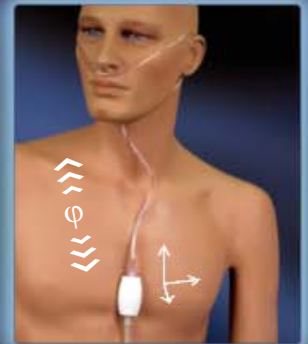
+

Bluetooth®  
communication  
between oximeter  
and VistaO<sub>2</sub>



+

Nasal Flow and  
Position Sensor



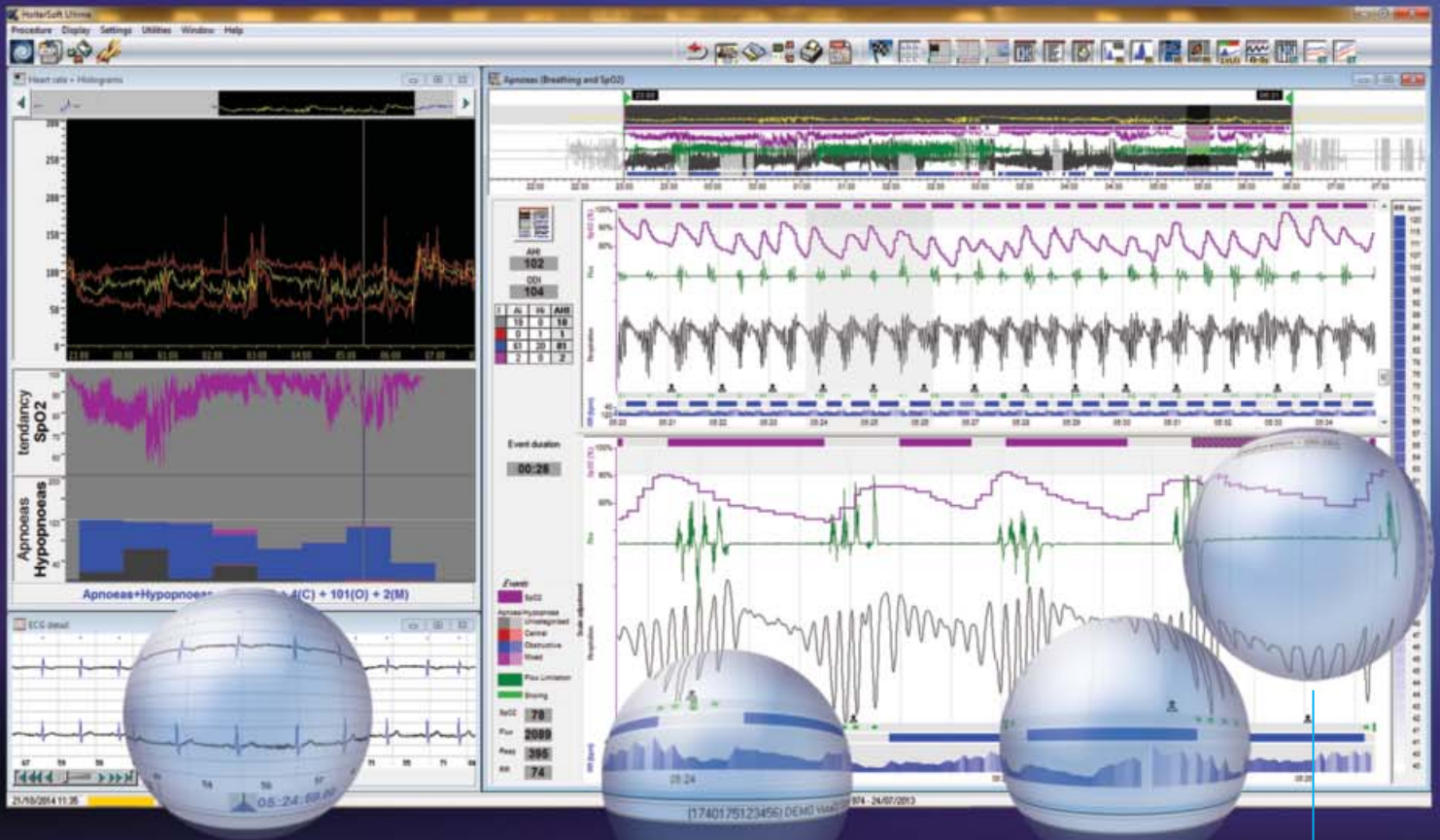
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**EXPANDED DETECTION** of Sleep-Disordered Breathing  
for your cardiovascular patients

# HOLTERSOFTE

## ULTIMA

An **SIMPLE** & **COMPREHENSIVE** Clinical Tool  
for Visualising and Analysing Cardio-Respiratory Activities



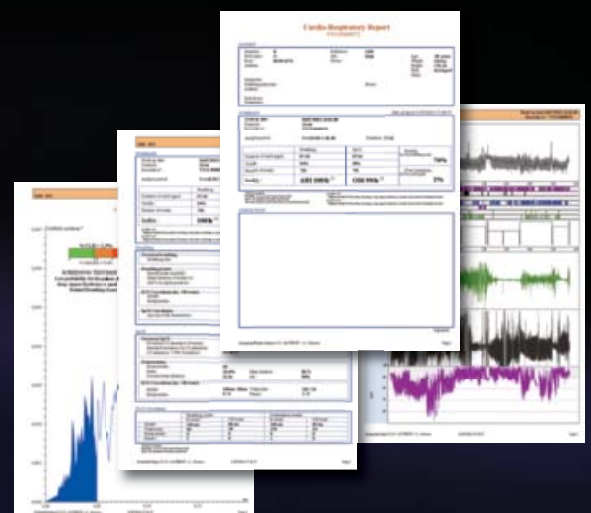
Simultaneously review ECG and Arrhythmias with Respiratory and Oximetry signals

Continuous Cardiac Rhythm

Sleep Apnoea Event

Oximetry Event

- Efficient **AUTOMATIC** analysis of Apnoea and Hypopnoea Events
- Indication of the **TYPE OF APNOEA** central, obstructive, mixed
- **VISUALISATION** of Cardiac Arrhythmias and Sleep Apnoea **RELATIONSHIP**
- **CLEAR & COMPREHENSIVE** Report with Validated Indexes





# TIME TO DETECT SLEEP APNOEA IN CARDIOLOGY PATIENTS



**Consider all cardiovascular risks  
to better care for your patients**

\* Sleep Apnea and Cardiovascular Disease, an Expert Consensus Document

American Heart Association, American College of Cardiology, etc., Journal of the American College of Cardiology 2008

Chouchou F, Poupard L, Philippe C, Court-Fortune I, Barthélémy JC, Roche F. Thoracic impedance, in association with oximetry, in a multi-modal ECG Holter system is useful for screening sleep disordered breathing. Int J Cardiol. 2013 Feb 10;163(1):100-2

Poupard L, Mathieu M, Goldman M, Chouchou F, Roche F. Multi-modal ECG Holter system for sleep-disordered breathing screening : A validation study. Sleep Breath. 2011 Jul 26.

GENERAL	Type of recorder	Holter ECG & Polygraph
	Data storage	256/512 MB Compact Flash Card
	Duration of monitoring for ECG + Polygraph	30 hours (2 channels) with NiMH batteries (1000mAh)
	Duration of monitoring ECG only (CF 512 MB)	10 days max (2 channels) 8 days max (3 channels)
ECG	Number of channels	2 or 3
	Vertical resolution	10 bits
	Sampling and storing rates (no compression)	200Hz
	Data capture range	12 mV ( $\pm 6$ mV)
	ECG accuracy in time	$\pm 2.5$ ms
	ECG accuracy in voltage	$\pm 6$ $\mu$ V
POSITION	Measurement	3 axis accelerometer
	Sampling Rate	10Hz
	Storage Rate	1Hz
FLOW	Sampling and Storing Rates	200Hz
	Vertical Resolution	10 bits
SNORING	Snoring Detection	Mathematically derived by Software Algorithm
	Sampling Rate	200Hz
IMPEDANCE	Derivation used	Green – Black electrodes
	Data capture range	2 to 30 resp/min
	Sampling	10Hz
BT	Bluetooth®	Version 2.0
	SpO <sub>2</sub> sampling	1Hz
CHARACTERISTICS	Power supply	2x 1.5v AAA (alkaline, lithium or NiMH)
	Length (front)	85 mm
	Overall length	90 mm
	Width	54 mm
	Depth	19 mm
	LCD display	160 x 104 pixels
	Weight (batteries included)	108 g
	Storage / Operating temperature	-20°C +45°C / +10°C +45°C
	Storage / Operating humidity	10% ---> 95% (no condensing)
	Storage / Operating pressure	500hPA ---> 1060hPA / 700hPA ---> 1060hPA

### NONIN WristOx2™ 3150

Bluetooth®	Version 2.0
Oxygen saturation range	0 –100%
SpO <sub>2</sub> accuracy	70 –100% $\pm 2$ digits
Sampling frequency	1Hz
Power supply	Two 1.5 volt AAA alkaline batteries

Distributed by

  
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