

**Products for Voice Measurement and Research** 



# Product Catalog March 2015



Dear Customer,

We proudly present our product catalog for 2015

Glottal Enterprises has worked to bring you line of products for voice and speech research. Founded and directed by Martin Rothenberg Ph.D, Glottal's innovative products are constantly improved upon through continuous research and development.

We strive toward excellence in product design and customer satisfaction.

If you need more information or clarification about any of our products, please contact us.

We look forward to assisting you.

Martin Rothenberg

(Founder, President)

Marcia Rothenberg

Vice President

Marcia

# **Table of Contents**

PAGE	
1	Policy & Terms
2	Featured Product
3	Nasality Visualization Systems
4	Visualization Systems Product Details
5	Aeroview
6	Waveview
7	Dualview
8	Voice Analysis Product Details
9	Accessories
10	Portable System for Subglottal Pressure Measurement
11	Electroglottograph (EGG)
12	Electroglottograph and Accessories Product Details
13	Contact Form



### **Policy and Terms**

#### **Credit Policy**

Glottal offers 30-day terms for qualified customers within the United States of America.

Products sold to overseas customers will only be shipped upon payment realization, unless arrangements are made otherwise.

#### **Shipping and Handling**

Various freight and shipping options are available.

All shipping and handling charges will be prepaid and added to the invoice.

#### **Returned Goods**

Glottal endeavors to ship quality products that are defect-free. Please make sure that your sales agent has discussed the product and your requirements with you prior to sales and shipping.

We understand that occasionally, products might have to be returned. Prior to shipping any product back to Glottal Enterprises, please contact your sales agent at Glottal to discuss options. Restocking and shipping/handling fees may be imposed.

#### Non-returnable goods

We cannot accept returns on any:

**Discontinued Product** 

Product that cannot be returned in a clean state.

#### **Featured Product**



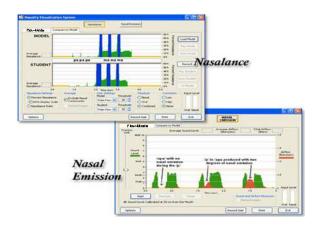
#### CV — OroNasal Mask

The Glottal Enterprises proprietary CV (Circumferentially Vented) pnuemotach mask was created by Dr. Martin Rothenberg, Glottal Enterprises Founder. The CV mask, or Rothenberg Mask, provides the most up-to-date and reliable way to measure airflow in speech and singing. It was developed to provide an alternative to the solid wall respiratory masks that muffle and distort the voice when used for measuring speech and singing. Unlike a respiratory mask, a CV mask can provide meaningful measurements of Sound Pressure Level and does not appreciably disturb the voice formants.

The latest version of the CV mask incorporates everything best about the CV Mask and takes it further. The new, dual-chamber OroNasal CV Mask allows for separate measurements of airflow from the nose and the mouth. It is available in two sizes and can be sterilized. The stainless steel wire screen that allows the measurement of airflow is located on removable screen rings that can be easily replaced if damaged without replacing the entire mask.

# Nasality Visualization Systems (Nasal Emission, Nasalance and NVS)

#### **MEASURES NASALANCE AND NASAL EMISSION**



The NVS allows the measurement of Nasalance in vowels and Nasal Emission of airflow in pressure consonants.

This system measures:

**Nasal Emission:** Measures and displays airflow through the nose during consonants requiring oral air pressure using the Glottal Enterprises OroNasal CV Mask.

**Nasalance**: Non-invasively provides data on velopharyngeal closure in vowels through a state-of-the-art implementation of the standard Nasalance measure, using a choice of OroNasal CV Mask or a convenient separator handle.



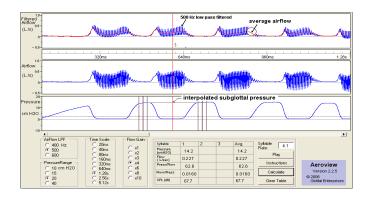
## **Nasality Visualization Systems\* Product Details**

NAS-1 SEP Includes:	Nasalance Measurement and Feedback System w Removable Separator Plates Nasalance software Nasalance Separator handle w/ three removable separator plates, narrow, medium, wide One Calibration verification tube
NAS-1 Mask Includes:	Nasalance Measurement and Feedback System with Both Mask and Separator Nasalance software Nasalance Mask handle with electronics One OroNasal Mask - adult or child size
NAS-1 Pro Includes:	Nasalance Measurement and Feedback System with Both Mask and Separator Nasalance software Nasalance Separator handle with three removable separator plates - narrow, medium, wide Nasalance Mask handle with electronics One OroNasal Mask - adult or child size One Calibration verification tube
NEM-1 Single User Includes:	Nasal Emission Measurement and Feedback System  NEM software One OroNasal Mask - adult or child size  NEM mask handle with electronics and USB connectivity
NEM-1 Multi-User Includes:	Nasal Emission Measurement and Feedback System  NEM software Two OroNasal Masks, one adult and one child  NEM mask handle with electronics and USB connectivity
NVS Multi-User <i>Includes:</i>	Nasality Visualization System - Combines the Nasalance and Nasal Emission Systems  Nasalance mask handle with electronics and USB connectivity  Nasalance Separator handle with three removable separator plates - narrow, medium, wide  Nasal Emission mask handle with electronics and USB connectivity  Two OroNasal Masks - 1 adult and 1 child  Calibration verification tube  Nasalance & Nasal Emission software
NVS Single User Includes:	Nasality Visualization System-Combines the Nasalance and Nasal Emission Systems  Nasalance mask handle with electronics and USB connectivity  Nasalance Separator handle with three removable separator plates - narrow, medium, wide  Nasal Emission mask handle with electronics and USB connectivity  One OroNasal Mask - adult or child  Calibration verification tube and  Nasalance & Nasal Emission software
sVis-1 MU	<b>s-Visualization System</b> - Provides a continuous real-time display in chart form for production practice, with the last 5 seconds available for study when the recording is stopped. Comes with a Head-set Microphone and software.
Computer	Laptop Computer with all software (Nasalance & Nasal Emission) pre-installed. (Does not include the cost of the software)
SW1	Student - Teacher Switch

<sup>\*</sup> These products are for research and teaching purposes only. They are not medical devices. They are not intended to be used in the diagnosis, cure, treatment, mitigation or prevention of disease and are not intended to affect the structure or function of the body.

# **Aeroview** (System for Phonatory Aerodynamics)

MEASURES AVERAGE GLOTTAL RESISTANCE, AIRFLOW, AND INTERPOLATED SUBGLOTTAL AIR PRESSURE



Aeroview is a system for phonatory aerodynamics using the CV OroNasal mask to measure the "average glottal resistance" during vowel production. It displays average glottal airflow and interpolated subglottal air pressure.

It provides the Sound Pressure Level and the audio derived from the wideband airflow signal, as well as the voice fundamental frequency.

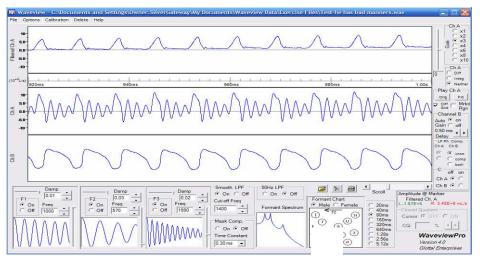
Aeroview can be used to estimate the voice Phonatory Threshold Pressure.



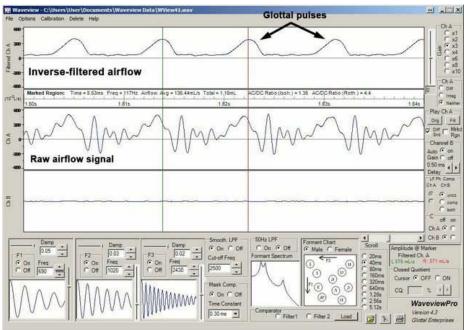
# Waveview (Inverse Filtering System)

#### A CONVENIENT WAY TO INVERSE-FILTER AN ORAL AIRFLOW OR RADIATED PRESSURE

The Waveview computer program inverse filters CV OroNasal Mask (airflow) or microphone (radiated pressure) waveforms during speech and singing.



Inverse filtered airflow signal with an EGG signal on Channel B



Inverse filtered airflow signal

#### **Dualview**

#### (Dual Airflow Display System)

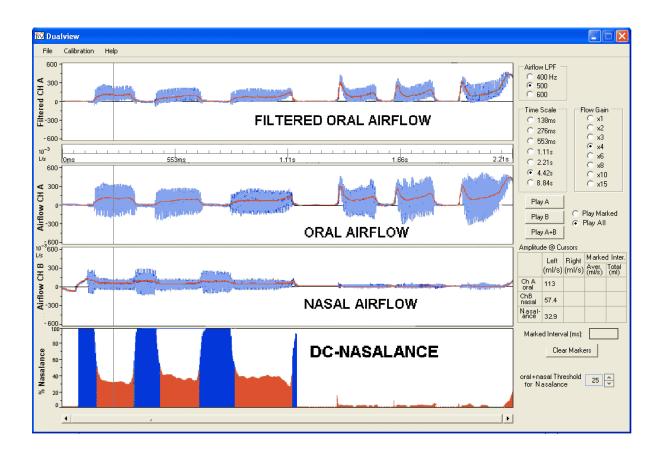
#### **DISPLAYS ORAL AIRFLOW DURING CONSONANTS**



The Dualview system will display two airflow channels, nominally the oral and nasal airflow waveforms, from a dual-chamber Glottal Enterprises CV OroNasal Mask, and compute and display the %DC Nasalance from these variables.

The DC Nasalance display is comparable to the displays of (AC) Nasalance obtained from audio waveforms by the Nasality Visualization System.

DC Nasalance has the advantage of providing absolute readings at zero Nasalance (no velopharyngeal leakage) and 100% Nasalance (nasal consonants), and therefore provides a more intuitive display than a conventional nasalance measurement system.



### **Voice Analysis Product Details\***

#### **Aeroview Systems\***

AeroviewPro (Phonatory Aero- dynamics System)	Contains:  2-chamber CV OroNasal Adult Mask  2-chamber CV OroNasal Child Size Mask  Mask Handle for using OroNasal mask  Set of Transducers - PT-2E, PT-25 with BFC-2 Splitter Cable  Oral Pressure Adapter  A-D Transducer Electronics  Manual Pressure Calibrator  Manual Flow Calibrator  AeroviewPro Software
AeroviewPlus	AeroviewPro (all components) + WaveviewPro Software

#### **Dualview systems\***

Dual Airflow System Package	Contains: A-D Transducer Electronics Dual Transducer Handle Manual Flow Calibrator Set of Two Wideband Low Pressure transducer (PT-2E) with BFC-2 Splitter Cable OroNasal 2-chamber CV OroNasal Mask Dualview Software
Dual Airflow System Add-on Package	Contains: Low pressure transducer (one) Dualview Software  (For customers who have or are purchasing an Aeroview System)

#### **Waveview System\***

WaveviewPro	Contains:
(Inverse Filtering	2-chamber CV OroNasal Adult Size Mask
System Package )	2-chamber CV OroNasal Child Size Mask
	Mask Handle for using OroNasal Mask
	MS0119 A-D Transducer Electronics
	PT-2E Wideband Low pressure transducer
	Manual Flow Calibrator
	WaveviewPro Software

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### **Accessory Product Details\***

#### Masks, Handles & Accessories

S/T-MA1	OroNasal 2-chamber CV Teen-Adult Mask
S/T-MC1	OroNasal 2-chamber CV Child Mask
S/T-M1A-5	Pack of 5 Teen-Adult OroNasal Masks
S/T-SR-8	Package of 8 replacement screen rings
DTH-1	Dual Transducer Mask Handle

#### **Software**

<b>Dualsoft:</b>	Dualview Software
WVPsoft:	WaveviewPro Software
AVPsoft:	AeroviewPro Software
S/T-L1:	Software License for second computer

#### **Transducer Modules**

PT-2E	Low pressure transducer for airflow with extended frequency response
PT-25	Medium pressure transducer for 25cm H2O
PT-2E/PT-25	Set of transducers (PT-2 and PT-25) with BFC-2 Splitter Cable
PT-75	High Pressure Transducer for 75cm H20
BFC-2	Bifurcated cable to use two PT series transducers simultaneously
OPA-1	Oral pressure adapter

#### **Transducer Power and USB Data Acquisition Electronics**

MS-110	A-D electronics for providing transducer power
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#### **Calibration Units**

PC-1	Manual pressure calibrator
FC-1	Flow Calibrator

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# PG100E and PG20E\* (Portable System for Subglottal Pressure Measurement)



The air pressure in the lungs during speech or singing, commonly referred to as the subglottal pressure, supplies the energy that generates the human voice. Knowledge of the subglottal pressure driving the laryngeal voice source is very important in understanding the operation of the voice.

Unfortunately, until recently, the subglottal pressure has been difficult to measure non-invasively. However, the new PG-20E and PG-100E are handheld, batteryoperated devices that can provide a realtime estimate of the subglottal pressure during speech or singing.

The PG-20E and PG-100E are self-contained systems – no computer or computer software is needed for their operation. The PG-20E and PG-100E differ only in pressure range measured. The PG-20E measures up to 20 cm H2O and the PG-100E up to 100 cm H2O.

PG-20E	PG-20E Subglottal Pressure Extrapolation System
PG-100E	PG-100E Subglottal Pressure Extrapolation System
PG Tubes	Pack of 20 tubes with Luer Lock connectors
PG Tubes	Pack of 50 tubes with Luer Lock connectors
PG Tubes	Pack of 100 tubes with Luer Lock connectors

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### **EG2-PCX2 Electroglottograph**

# THE RESEARCH STANDARD FOR NONINVASIVE MEASUREMENT OF VOCAL FOLD VIBRATION



The Glottal Enterprise Electroglottograph produces very low-noise EGG waveforms; and the patented dual-channel configuration of the EG2-PCX2 enables it to indicate proper electrode placement and provide a quantitative indication of vertical laryngeal movement.

Matching PhaseComp software reduces waveform distortion caused by low frequency phase distortion inherent in EGG signals as well as greatly reducing the low frequency noise and artifacts caused by articulatory movements.

The EG2-PCX2 is a complete package and comes with:

2-Channel Electroglottograph w/microphone preamplifier 35mm dual channel electrodes

Dual rechargeable batteries

3.5mm and XLR microphone jacks

Analog Stereo output jack and an USB digital output jack Laryngeal Tracking Output

Laboratory quality Behringer ECM-8000 omnidirectional mic Glottal Enterprises M80 omnidirectional headset microphone EG2-PCX2 Manual

LS-1 Larynx Simulator with Manual

### **Electroglottograph and Accessories Product Details**

#### **Electroglottograph and Accessories**

EG2-PCX2	Two-channel electroglottograph with microphone input and preamplifier.
	35mm dual channel electrodes
	Dual rechargeable batteries 3.5mm and XLR microphone jacks
	Analog Stereo output jack and an USB digital output jack
	Laryngeal Tracking Output Laboratory quality Behringer ECM-8000 omnidirectional mic
	Glottal Enterprises M80 omnidirectional headset microphone
	EG2-PCX2 Manual
	LS-1 Larynx Simulator with Manual
EL-2	2 Channel 35mm diameter electrodes and cable
EL-2S	2 Channel 28mm diameter electrodes and cable
LS-1	Larynx simulator for calibrating EG2 series electroglottographs
PhaseComp	Software to allow you to record and display the Electroglottograph and one addi-
Software	tional signal with low frequency phase compensation and adjustable delay. Automatic measurement of open and closed quotient.



#### 12. Contact Form

#### Mail this form to:

Glottal Enterprises Inc. 1200 E. Fayette Street Suite #15 Syracuse, NY 13210 USA Fax to: + 1 315 422 1216 Email: <u>information@glottal.com</u>

Name & Title				
Organization				
Department				
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Phone		Fax		
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send us:	Information Quotation			
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