



# Headphone Seminar

Next Generation "Hi-Res" Headphones Testing (R&D) & New G.R.A.S. 45CC (Including Bluetooth)

Date : 13<sup>th</sup> June ,2017 (Taipei)

Date : 15<sup>th</sup> June ,2017 (Shenzhen)

Email : [sales@svsamford.com](mailto:sales@svsamford.com)

Contact: +886 983520228 (Lisa Wen) / +86 13828724809 (Frank Wang) / +86 13922401006 (Alan Wang) / +852 28339987 (Kathy Xu)



## S&V Samford Special Activity Headphone Seminars are coming!

The Next Generation "Hi-Res" Headphone Testing (R&D) & New G.R.A.S. 45CC (Including Bluetooth) Headphone Seminar will be held on **13<sup>th</sup> June** in Taipei and **15<sup>th</sup> June** in Shenzhen.

[Registration Form](#)

**Last Registration opportunity!** For further information, please do not hesitate to contact us.

**The 17th International Symposium on Therapeutic Ultrasound**  
S&V Samford and ONDA, participated in the **17th International Symposium on Therapeutic Ultrasound Exhibition** and introduce **Fiber Optic hydrophone** (Products Details shown in P.3) .



Nanjing University helper Mr. Li (left)  
S&V Samford Kathy Xu (Middle) &  
ONDA 's Vice President Mr. Petrie



**HFO-690 whole setup**, including a fiber optic controller, an oscilloscope, an amplifier, a transducer, a fiber hydrophone.



### About Us

S&V Samford Ltd.  
[www.svsamford.com](http://www.svsamford.com)

We are devoted to provide quality and innovative solutions for Customers with interest in Sound and Vibration, Condition monitoring and Air Quality monitoring. With a team of passionate professionals, we provide dedicated support and continue education to our customers.

### Contact us:

Email: [sales@svsamford.com](mailto:sales@svsamford.com)

Tel : (852) 2833 9987

Fax : (852) 2833 9913

### Monthly Feature Products

New Multifunction Sound Calibrator – G.R.A.S. 42AG

2 Channel Power Module- G.R.A.S. 12AA

Fiber Optic Hydrophone ONDA HFO-69

ONDA HGL Hydrophones

NEW

## Multifunction Sound Calibrator 42AG



G.R.A.S.  
SOUND & VIBRATION

### New Multifunction Sound Calibrator – 42AG



42AG Multifunction Sound Calibrator is a portable, battery operated sound source for calibration and check of microphones and sound level meters. It is designed for field use and comes with a protective casing. It conforms to the requirements in **IEC 60942** for a **class 1** sound calibrator.

It can produce a sinusoidal signal of **250 Hz or 1 kHz at 94 dB or 114 dB**. For documentation purposes, 42AG provides display of the environmental conditions: ambient air pressure, temperature.

The sound is generated by **a small loudspeaker integrated in the acoustic coupler**. An internal reference microphone measures the level in the coupler and a feedback circuit automatically adjusts the level. Therefore, the calibration level is virtually independent of ambient conditions like temperature, atmospheric pressure and humidity within the specified range of operation.

The calibrator has been designed to serve **1" and smaller microphones** and **sound level meters** equipped with such microphones in field. 1" microphones fit directly in the calibrator coupler, while 1/2", 1/4" and 1/8" microphones are served by application of adapters that are part of the delivery.

### Features

Portable, battery powered and designed for in-the-field use

Easy-to-use OLED Display

For documentation purpose, 42AG provides display of the environment conditions: ambient air pressure

Functional and practical all-in-box solution

Proven stability

Time-saving and cost effective

[Read More](#)

### About G.R.A.S

<http://www.gras.dk/>

Establishment in 1994.

G.R.A.S. have been 100% dedicated to developing and manufacturing **high-quality measurement microphones** and related acoustic equipment.

**G.R.A.S** founded by the Danish acoustics pioneer Gunnar Rasmussen who for more than 60 years has contributed to the world of sound and vibration with his unique ideas and designs.

### Specification

- **Sound pressure level:** 94 dB or 114 dB
- **Frequency:** 250 Hz or 1 kHz
- **ANSI:** S1.40
- **IEC:** 60942 class 1

## 2 Channel Power Module 12AA with gain, filters and SysCheck generator



**G.R.A.S.**  
SOUND & VIBRATION

### 2 Channel Power Module with gain, filters and SysCheck generator- G.R.A.S. 12AA

The G.R.A.S. 12AA can be **powered** either by internal standard batteries or an external DC supply (12 V-18 V), e.g. a mains/line adapter. It is built into a sturdy anodized aluminium cabinet. The polarization voltage for the microphone fitted to the preamplifier can be set to *0 V for prepolarized microphones*, or *200 V for externally polarized microphones*. The voltage supply for the preamplifier can be set to 120 V for maximum dynamic range, or 28 V for minimum power consumption. The G.R.A.S. 12AA **will run for up to 10 hours** on fresh standard *alkaline batteries*. A Battery meter indicates the condition of the batteries.

The inputs are *two 7-pin LEMO sockets* (A and B) on the front panel which are wired up for G.R.A.S. microphone preamplifiers, e.g. 26AB, 26AC, 26AJ and 26AK, but are also compatible with other available makes of similar microphone preamplifiers.

The outputs are *two standard BNC connectors* (A and B) on the rear panel. Both channels have an overload indicator. The gain in each channel can be set individually from  $-20$  dB to  $+40$  dB in steps of 20 dB.

The calibrator is powered from two type LR03 alkaline batteries (AAA-size). If the voltage supplied by the batteries is too low to ensure proper operation, the calibrator will automatically switch off or not switch on.

### Typical applications and use

- \*Building -acoustics measurements
- \*Acoustic-transfer measurements
- \*Sound- intensity measurements

### Design

It has the following Signal conditioning setting :

- Linear-response
- A-weighting
- High-pass filtering

[Read More](#)

### About G.R.A.S

<http://www.gras.dk/>

Establishment in 1994.

G.R.A.S. have been 100% dedicated to developing and manufacturing **high-quality measurement microphones** and related acoustic equipment.

**G.R.A.S** founded by the Danish acoustics pioneer Gunnar Rasmussen who for more than 60 years has contributed to the world of sound and vibration with his unique ideas and designs.

### Specification

- **Frequency range ( $\pm 1$  dB)** : 3.5Hz to 200 kHz
- **Frequency range ( $\pm 3$  dB)**: 2Hz to 250 kHz
- **Output channel(s)** : 2
- **Output impedance** :  $30 \Omega$

# Fiber Optic Hydrophone HFO – 690



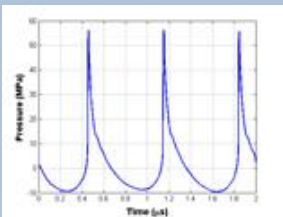
## Fiber Optic Hydrophone ONDA HFO-690

### A hydrophone for high pressure applications

The HFO-690 is the latest generation optical fiber hydrophone designed to uniquely support high intensity fields for applications such as **HIFU (High Intensity Focus Ultrasound)**, providing both acoustic pressure and temperature measurements simultaneously. Whereas traditional piezoelectric hydrophones were susceptible to damage, the HFO can withstand acoustic pressures up to 500 MPa. Furthermore, the HFO system was designed to be easy to use. Operation with a visible wavelength makes the alignment process simple and safer to use.

### Features

- Support high acoustic pressures up to 500 MPa
- Bandwidth Limiting filters to reduce /noise Equivalent Pressure
- Easy to use touch screen user interface
- Simultaneous temperature measurement
- Simple calibration routine
- Fully integrated system with no separate modules
- Visible light source to simplify alignment
- Simple cleaving procedure to repair probes within minutes
- Immune to electrical interference
- Optically filtered to reject stray environmental light



Sample waveform demonstrates non-linear propagation



HIFU Measurement

## About ONDA

<http://www.ondacorp.com/index.html>

ONDA is the global leader in *ultrasound measurement instrumentation* and services. Their products are used to acoustically test devices in the medical, industrial, and electronic markets. Over 3,000 hydrophones have been used around the world to support a broad range of applications including medical imaging, therapeutic ultrasound, ultrasonic cleaning, and non-destructive testing.

ONDA has served over 1,000 unique customers in over 35 countries representing Fortune 10 companies, government research centers, and the most prominent universities.

ONDA also provides services to design, develop, test, calibrate, and manufacture the most complex ultrasonic devices. Our capability is backed by a fully equipped machine shop with advanced CNC tooling, a complete digital electronics laboratory, and an acoustic measurement laboratory.

[Read More](#)

# HGL Hydrophones



## ONDA HGL Hydrophones

The HGL Series hydrophones were designed to meet or exceed recommendations of section 3.3.2 of the AIUM Acoustic Output Measurement Standard (May 1998). They have an exceptionally flat sensitivity in a small and sturdy package. These hydrophones are excellent in-house standards for ultrasonic acoustic intensity measurements, and for general purpose field mapping.

### Features

- High sensitivity
- Small effective aperture
- Broadband
- Solid construction
- Flawless integration with AH preamplifiers
- Flat (+/-3db) 250KHz to >> 20Mhz\*

\* Use of the AG-20X0 preamplifier is required to maintain +/- 3 dB range from 20 to 40 MHz for the HGL-0085 and HGL-0200. For measurements above 40 MHz, the AH-20X0 preamplifier is advised

### Typical Specifications

	HGL-0085	HGL -0200	HGL-0400	HGL-1000
Frequency Range ( $\pm 3\text{dB}$ )	0.25 to 40 MHz		0.25 to 20 MHz	
Electrode aperture	85 $\mu\text{m}$	200 $\mu\text{m}$	400 $\mu\text{m}$	1000 $\mu\text{m}$
* EOC Nominal Sensitivity [dB re 1V/ $\mu\text{Pa}$ ]	-278	-266	-251	-240
* EOC Nominal Sensitivity [nV/Pa]	13	50	282	1000
Acceptance angle (-6dB at 5 MHz)	>150 $^\circ$	100 $^\circ$	30 $^\circ$	20 $^\circ$
Capacitance	30 pF			
Max. Operating Temperature	50 $^\circ\text{C}$			

[Read More](#)

## About ONDA

<http://www.ondacorp.com/index.html>

ONDA is the global leader in *ultrasound measurement instrumentation* and services. Their products are used to acoustically test devices in the medical, industrial, and electronic markets. Over 3,000 hydrophones have been used around the world to support a broad range of applications including medical imaging, therapeutic ultrasound, ultrasonic cleaning, and non-destructive testing.

ONDA has served over 1,000 unique customers in over 35 countries representing Fortune 10 companies, government research centers, and the most prominent universities.

ONDA also provides services to design, develop, test, calibrate, and manufacture the most complex ultrasonic devices. Our capability is backed by a fully equipped machine shop with advanced CNC tooling, a complete digital electronics laboratory, and an acoustic measurement laboratory.