



## G.R.A.S. 42AB Sound Calibrator, Class 1

Sound pressure level: 114 dB (re. 20  $\mu$ Pa)  
 $\pm$  0.2 dB  
Frequency: 1 kHz  
Temperature range: -10  $^{\circ}$ C to + 50  $^{\circ}$ C

The G.R.A.S. 42AB Sound Calibrator is a small battery-operated precision microphone calibrator. The calibrator can be used directly on 1" microphones. Adapters for calibrating 1/2" (factory mounted), 1/4" and 1/8" microphones are included.

### Technology

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#### Typical applications and use

- Microphone calibration
- Microphone comparisons

#### Design

The G.R.A.S. 42AB works at the reference frequency (1 kHz) of the internationally standardized weighting filters A, B, C, and D. This means that it can be used directly for calibrating sound level meters and other similar equipment with these weighting filters activated without having to make corrections.

The calibration level is 114 dB (re. 20  $\mu$ Pa) which corresponds to 10 Pa. This is enough to ensure immunity to background noise without overloading the equipment.

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

The 42AB consists of a sound source, a reference microphone, and an electronic control circuit. The special reference microphone is extremely stable and independent of variations in barometric pressure, temperature, and humidity. The reference microphone and control circuit together maintain a constant sound pressure level inside the calibration chamber and automatically adjust for changes in load volume, temperature, humidity, and barometric pressure.

Additionally, the calibrator will automatically switch off when the microphone under test is removed from the calibration chamber.

The output level of the 42AB, viz. 114 dB (re.20  $\mu$ Pa) at 1 kHz, meets the requirements of IEC Standard 60942 (2003-01) Class 1 and is therefore in accordance with international standards. It complies with ANSI S1.40 (1997).

The G.R.A.S. 42AB is supplied with a leather protection case and an individual calibration certificate.

## Specifications

Frequency	Hz	1000
Power supply, external	Vdc	TBD
Input signal (max)	Vrms	TBD
AC output	Vrms	TBD
Actuator output	Vdc	TBD
Microphone polarization output	Vdc	TBD
AC output impedance	k $\Omega$	TBD
Actuator output impedance	M $\Omega$	TBD
Microphone polarization output impedance	M $\Omega$	TBD
Gain	dB	TBD
CE/RoHS compliant/WEEE registered		No/
ANSI standard		S1.40
IEC standard		60942
Weight	g / oz	185.00 / 6.53

## Ordering info

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Included

[G.R.A.S. RA0049](#)

[G.R.A.S. RA0069](#)

[G.R.A.S. EL0003](#)

Delivered fitted with a removable adapter for calibrating ½" microphones. Remove this for calibrating 1" microphones.

Adapter for ¼" microphones

Adapter for 7" microphones

9 V alkaline battery



## **We make Microphones**

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### **Tradition**

Since the establishment in 1994, G.R.A.S. have been 100% dedicated to developing and manufacturing high-quality measurement microphones and related acoustic equipment. 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. From the first reproducible 1" condenser measurement microphone that enabled quality measurements and instrumentation for acoustic calibration, Mr. Rasmussen's ingenuity and foresight led to the world's most popular acoustic sensor: The 1/2" measurement microphone. Then the 1/4" and 1/8" microphones followed with outstanding dynamic and high-frequency capability that brought higher definition and transparency into impulse noise diagnostics. Many variants have been made available over the years; all based on Gunnar Rasmussen's original 1" pressure microphone design.

### **Innovation**

At G.R.A.S., we and our customers benefit daily from Mr. Rasmussen's exceptional understanding of acoustics, physics, electronics and measurement needs. Not only in R&D but throughout the organisation, we are proud to develop, produce and offer the broadest range of high-quality measurement microphones and accessories in the industry. And as a family company, now owned and managed by the two sons, Per Rasmussen and Peter Wulf-Andersen, we safeguard our heritage and knowledge to help create new opportunities with our customers. We work with everybody with an interest in sound or noise within the fields of aerospace, automotive, audiology, consumer electronics, noise monitoring, building acoustics and telecommunications, metrology, education, consultancy, legislation and system integration.

### **Quality**

All our microphones are solely produced in stainless steel and in a quality that allows for a 5 year warranty. Should you by mistake damage the diaphragm on a G.R.A.S. microphone, our special technique enables repair at very reasonable price.

### **Partners**

G.R.A.S. is represented worldwide in more than 40 countries by subsidiaries and distributors. Whether you are searching for a multi-channel solution or just a replacement microphone for your sound level meter G.R.A.S. will help solve your needs. Visit [gras.dk](http://gras.dk) for your local G.R.A.S. partner.