

# GRAS 42AG

Multifunction Sound Calibrator, Class 1



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

The GRAS 42AG Multifunction Sound Calibrator is a portable, 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.

The GRAS 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 into 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. 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.

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.

## Benefits

42AG is designed to fulfill the need for a portable and versatile calibrator for field use. Also, it is designed to be the logical replacement or upgrade from existing calibrators.

42AG represents improved functionality and user-

friendliness. Its combination of portability, automatic level adjustment, and two calibration frequencies and levels makes it a complete and self-sufficient solution that can be used to perform a complete field-verification without the need for other instrumentation, e.g. for recording ambient calibration conditions.

With two calibration frequencies, 250 Hz and 1 kHz it is well suited for calibration of microphones that normally are calibrated at 250 Hz as well as sound level meters which normally are calibrated at 1 kHz.

42AG can calibrate at two different levels, 94dB, and 114 dB. The 114 dB is a level that suits microphones with medium sensitivity, while the low level of 94 dB makes it possible to calibrate microphones with high sensitivity without overloading the microphone.

## Warranty

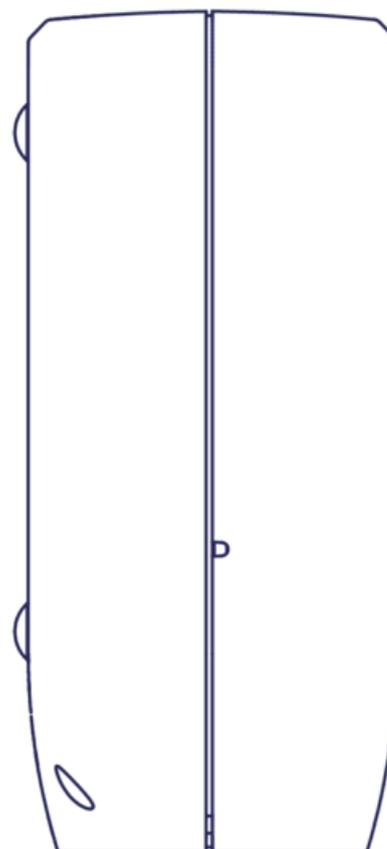
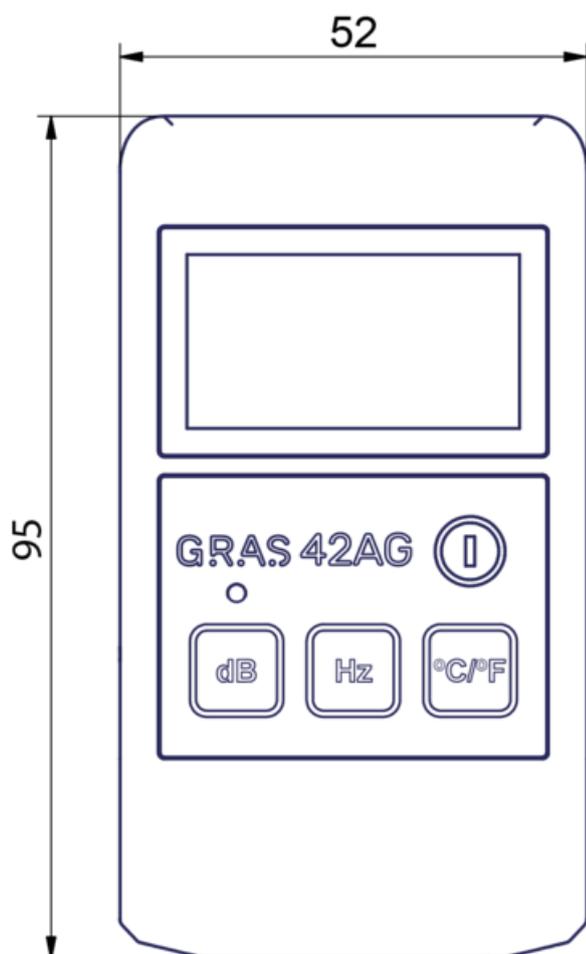
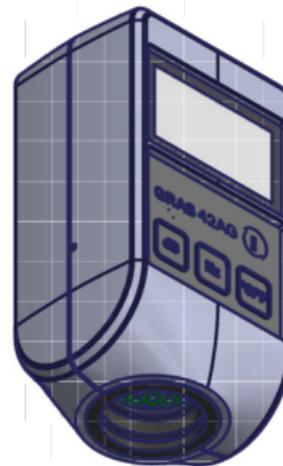
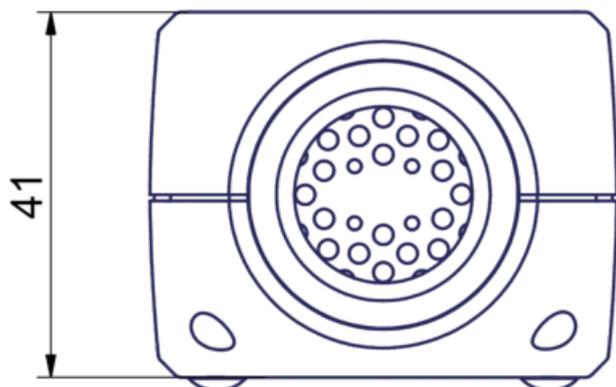
The warranty for 42AG is 2 years and covers defective materials and workmanship

Frequency	Hz	250 (251.19 ± 0.30 Hz) or 1 kHz (1000 ± 1 Hz)
Sound pressure level	dB	94 (± 0.2 dB) or 114 (± 0.2 dB)
ANSI standard		S1.40 (2006)
IEC standard		60942 (2017)
Microphone size		1", 1/2", 1/4" and 1/8"
Distortion		Max 2%
Stabilizing time		20 seconds
Sensitivity to environmental conditions		As specified for IEC 60942 class 1 / ANSI S1.40
Temperature range, operation	°C / °F	-10 to +50/14 to 122
Relative humidity, operation		25% to 90%
Air pressure, operation		65 kPa to 108 kPa
Display type and resolution		Mono-colour OLED graphical display – 128×64 (WxH)
Temperature range		-10°C to +50°C or 14°F to 122°F
Resolution / Accuracy		0.1°C / ±2°C or 0.1°F / ±2°F
Atmospheric pressure		65 kPa to 108 kPa; Resolution 0.1kPa; Accuracy ±0.4 kPa, (for temperature above 0°C)
Relative humidity		0% to 100%; Resolution 1%; Accuracy ±4%, (for temperature above 0°C and humidity in the range 25% to 85%)
Battery type		LR03 (AAA)
Battery life	h	> 10 hours
Battery low		Automatically switching off if battery voltage too low
CE/RoHS compliant/WEEE registered		yes/yes/yes
Weight	g / oz	125

Sound pressure level	dB	94 ( $\pm 0.2$ dB) or 114 ( $\pm 0.2$ dB)
Size ( LxWxH )		97x51.5x41 mm / 3.8x2.0x1.6 "

Level and frequencies at reference conditions (23,0°C/101,325 kPa/50% Relative Humidity) - levels in decibel relative to 20  $\mu$ Pa.

GRAS Sound & Vibration reserves the right to change specifications and accessories without notice.



## Included items

GRAS RA0297	Adapter for ½" microphones.
GRAS RA0049	Adapter for ¼" microphones
GRAS RA0069	Adapter for 1/8" microphones
GRAS EL0001	Four LR6-AA alkaline cells

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# GRAS Worldwide

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## About GRAS Sound & Vibration

GRAS is a worldwide leader in the sound and vibration industry. We develop and manufacture state-of-the-art measurement microphones to industries where acoustic measuring accuracy and repeatability is of utmost importance in R&D, QA and production. This includes applications and solutions for customers within the fields of aerospace, automotive, audiology, and consumer electronics. GRAS microphones are designed to live up to the high quality, durability and accuracy that our customers have come to expect and trust.

GRAS Sound & Vibration is represented through subsidiaries and distributors in more than 40 countries and is part of Axiometrix Solutions, a leading test solutions provider comprised of globally recognized measurement brands. Read more at [www.GRASacoustics.com](http://www.GRASacoustics.com)

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