



# Instruction Manual

GRAS RA4800 Adapter for Sensitivity Verification  
of Flush and Surface Microphones

## Revision History

Revision	Date	Description
1	2020-11-02	First edition
2	2022-06-15	Update Correction table with 40PS-1 values
3	2025-06-17	Calibration section updated

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## Contents

Introduction .....	4
Description .....	4
Procedure .....	5
Correction values.....	5
Warranty, Service and Repair.....	6

## Introduction

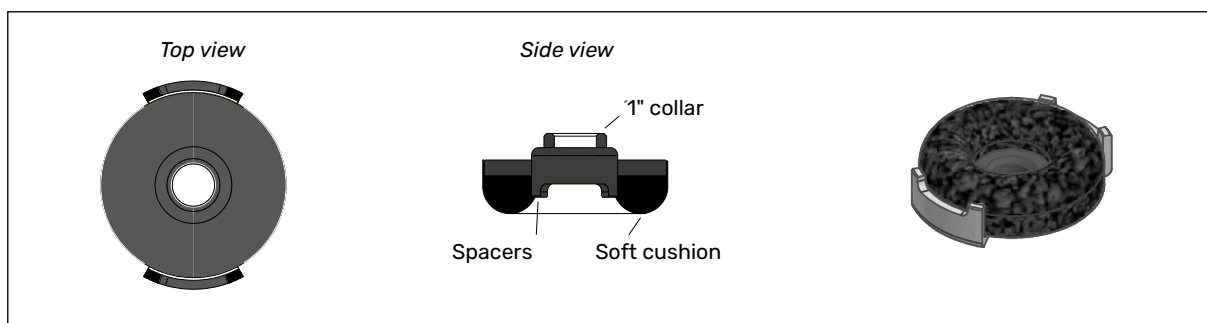
The RA4800 is an adapter intended for in situ verification of flush and surface microphones. When using the RA4800, there is no need for dismounting the microphone from the structure on which it is mounted, and therefore it allows for a very quick and convenient verification of the integrity of the measurement setup.

It will normally be used with a sound calibrator such as the GRAS 42AG Multifunction Sound Calibrator.

## Description

The adapter has three main features.

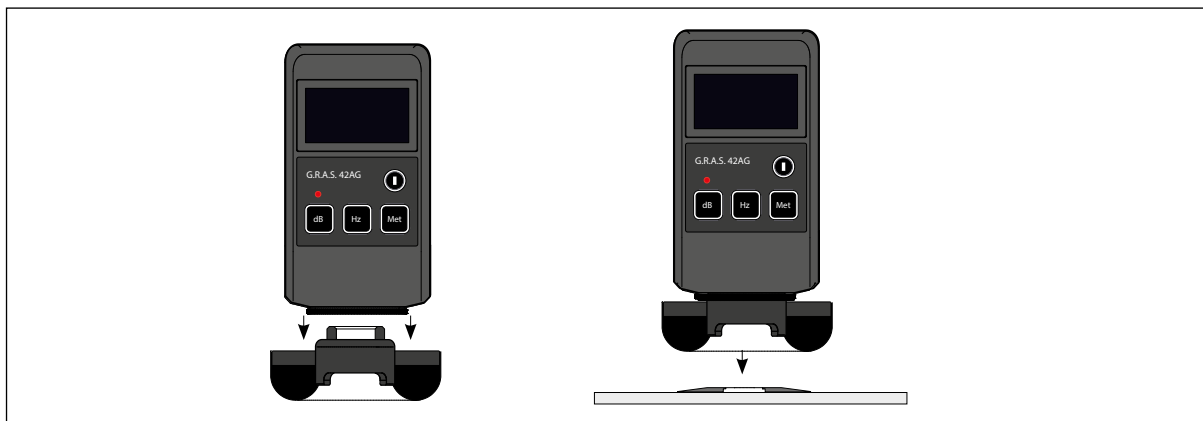
- It has a 1" stud/collar for fit with any GRAS calibrator fitted for use with an 1" adapter.
- It has a soft cushion similar to those found on circum-aural headphones. It creates a closed cavity over the microphone to be calibrated.
- It has four spacers that ensure (when the cushion is depressed) that the cavity is well-defined and will be the same from one calibration to the next.



**Fig. 1.** The RA4800 adapter/field verification set for level calibration.

## Procedure

Before verification, you must ensure that the microphone is properly connected and powered up.



**Fig. 2.** In situ verification using 42AG and RA4800.

When you have turned on the calibrator and pressed it down over the microphone, you must keep it there until the reading on the analyzer is stable.

Refer to the manual for 42AG for further information about how to operate the calibrator.

## Correction values

	250 Hz	1 kHz	Accuracy
40LA	- 0.6 dB	-2.1 dB	±0.2 dB
40LS	- 0.6 dB	-2.1 dB	±0.2 dB
40PS-1	0.03 dB	1.43 dB	±0.29 dB*, ±0.44 dB†
48LA	-0.8 dB	-3.0 dB	±0.2 dB
48LX-1	-0.8 dB	-3.0 dB	±0.2 dB
48LX-4	-0.8 dB	-3.0 dB	±0.2 dB
48LX-8	-0.8 dB	-3.0 dB	±0.2 dB

Correction Level = 42AG Nominal Level - Correction Value

ex.: 48LA, verified at 114 dB @ 1 kHz

Corrected Level = 114 - - 3 = 117 dB

\* @ 250 Hz

† @ 1 kHz

## Warranty, Service and Repair

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### Warranty, Service and Repairs

GRAS products are made of components from our proven standard portfolio and are all manufactured of high-quality material and branded parts that were chosen and processed to ensure life-long stability and robustness.

The warranty does not cover products that are damaged due to negligent use, an incorrect power supply, or an incorrect connection to the equipment.

Further information about warranty and our repair service can be found at:  
[grasacoustics.com/repair-center](https://grasacoustics.com/repair-center)

Manufactured to conform with:

CE marking directive:  
93/68/EEC



WEEE directive:  
2002/96/EC



RoHS directive:  
2002/95/EC



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