

# GRAS RA0016

20 dB Attenuator for externally polarized 1/2" microphones



Length: 47.5 mm  
Diam.: 12.70 mm

**Recommendation:** Choose a microphone with low sensitivity instead of using the RA0016.

The RA0016 is a 20 dB attenuator for inserting between a 1/2" microphone and preamplifier. It will attenuate the output signal of the microphone by 20 dB in order to avoid overloading the preamplifier. The RA0016 is useful when measuring very high sound pressure levels using a preamplifier with limited dynamic range.

The RA0016 will work properly only with externally polarized microphones. For prepolarized microphones, use the RA0018.

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## Introduction

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## Design

For precision measurements, the actual combination of microphone, attenuator and preamplifier should be calibrated with a precision calibrator like GRAS 42AA Pistonphone. The attenuation of the microphone signal is obtained by a capacitive voltage divider, and depends on both the microphone capacity and the preamplifier input impedance. The attenuation has been adjusted to 20 dB with a microphone with 20 pF capacity and with a typical GRAS preamplifier.

## Quality & Warranty

GRAS accessories are made of stainless steel, alloys and high-quality composites. These items are covered by a 2 year warranty respecting their intended use.

On consumables like batteries, cables and windscreens we offer a 6 month warranty.



# GRAS Worldwide

Subsidiaries and distributors in more  
than 40 countries

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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