# GRAS RA0016

## 20 dB Attenuator for externally polarized 1/2" microphones



V.

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.



## Technology

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

## Introduction

The GRAS 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.

## 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

HEAD OFFICE, DENMARK GRAS SOUND & VIBRATION Skovlytoften 33 2840 Holte Denmark Tel: +45 4566 4046 www.GRASacoustics.com gras@grasacoustics.com

GRAS SOUND & VIBRATION 9290 SW Nimbus Avenue Beaverton, OR 97008 Tel: 503-627-0832 Toll Free: 800-231-7350 www.GRASacoustics.com sales-usa@grasacoustics.com

GRAS SOUND & VIBRATION Unit 115, Gibson House, Ermine Business Park, Huntingdon, Cambridgeshire, PE29 6XU Tel: +44 (0) 7762 584 202 www.GRASacoustics.com sales-uk@grasacoustics.com

### CHINA

GRAS SOUND & VIBRATION Room 315, RuiBo Center(T1) Lane683, Shenhong Rd, Minhang District, Shanghai, China, 201107 Tel: +86 21 64203370 www.GRASacoustics.cn cnsales@grasacoustics.com



### 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 and related equipment for industries where acoustic measuring accuracy and repeatability are of the utmost importance. This includes applications and solutions for customers within the fields of aerospace, automotive, audiology, consumer electronics and other highly demanding industries. GRAS microphones are designed to live up to the high quality, durability and accuracy that our customers have come to expect, trust and require. 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



grasacoustics.com