

# GRAS 43BB-1

## Low-noise Ear Simulator System



Volume: 1260 mm<sup>3</sup> @ 500 Hz  
Dyn range: 10.5 dB(A) to 113 dB  
Based on IEC 60318-4

The 43BB-1 Low-noise Ear Simulator System is for acoustic low noise measurements on insert headphones, especially headphones with active noise cancellation. It is based on the IEC 60318-4 ear simulator standard. 43BB-1 Low-noise Ear Simulator System" includes a GRAS 12HF 1-Channel Power Module for Low-noise Systems. 43BB is shown in the product picture. For more information about 43BB-1 read the product introduction below.

## Introduction

The GRAS 43BB-1 is a low-noise, high-sensitive ear simulator system for measurements of sound pressure levels close to or below the threshold of human hearing.

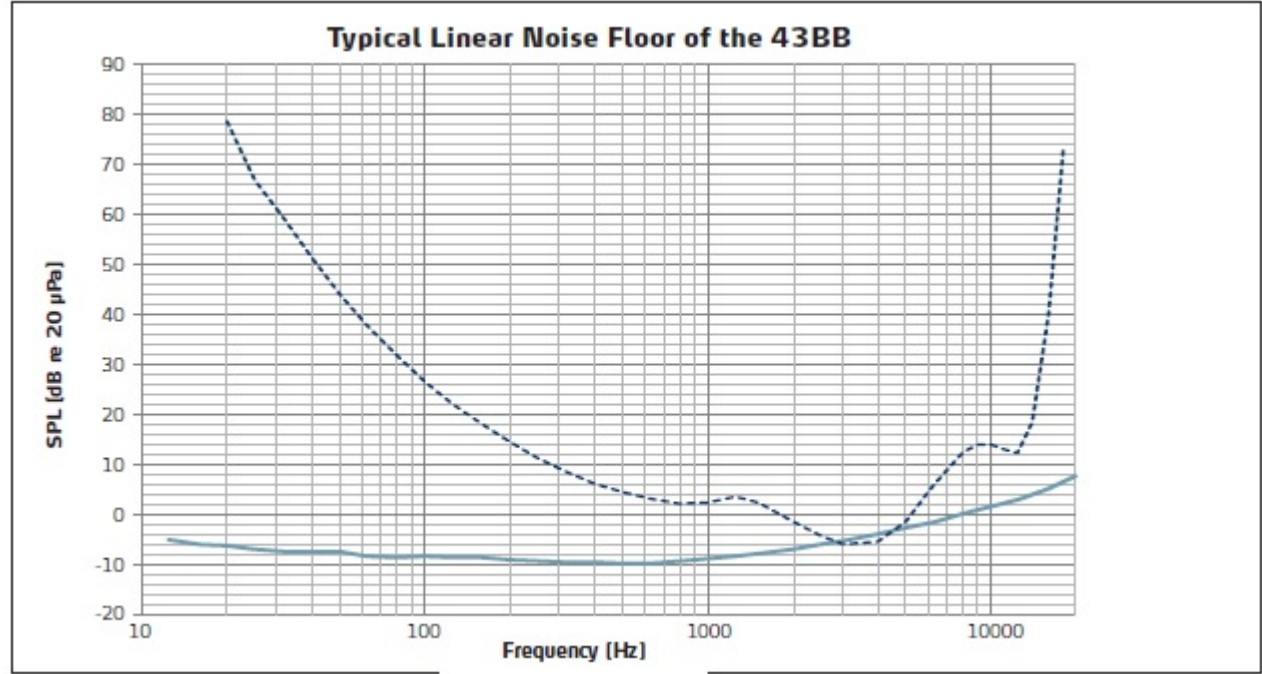
It is identical to the 43BB Low-noise Ear Simulator System except that it uses a 90-degree angled adapter for the preamplifier, and therefore can be used in binaural setups inside a 45BB KEMAR or a 45BC.

43BB-1 is part of the [45BB-12 KEMAR](#) with Anthropometric Pinna for Low-noise Ear- and Headphone Test 2-Ch LEMO, and [45BC-12 KEMAR](#) with Mouth Simulator and Anthropometric Pinnae for Low-noise Headset Test, 2-Ch LEMO.

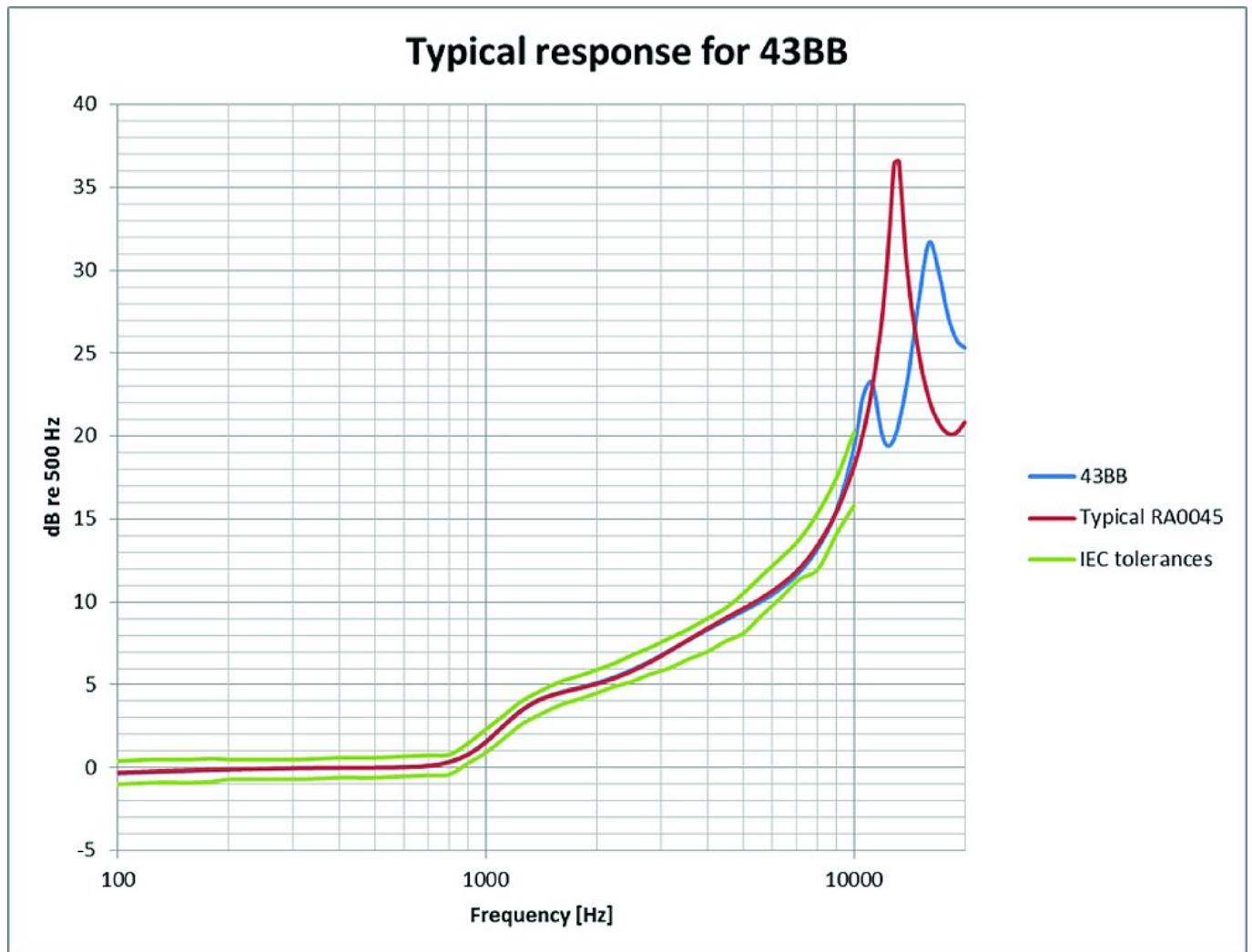
Read about the 43BB [here](#).

|   |                 |                |
|---|-----------------|----------------|
| Connector type  |                 | 3 m 7-pin LEMO |
| Polarization/Connection   |                 | 0 V / CCP      |
| Theoretical dynamic range lower limit with GRAS preamplifier                              | dB(A)           | 10.5           |
| Theoretical dynamic range upper limit with GRAS preamplifier @ +28 V / ±14 V power supply | dB              | 113            |
| Coupler volume  | mm <sup>3</sup> | 1260 @ 500 Hz  |
| CE/RoHS compliant/WEEE registered   |                 | Yes/Yes/Yes    |

Noise floor and frequency response for 43BB-1 is identical to the 43BB:



The noise floor (solid line) is typically below the threshold of human hearing (dashed line).

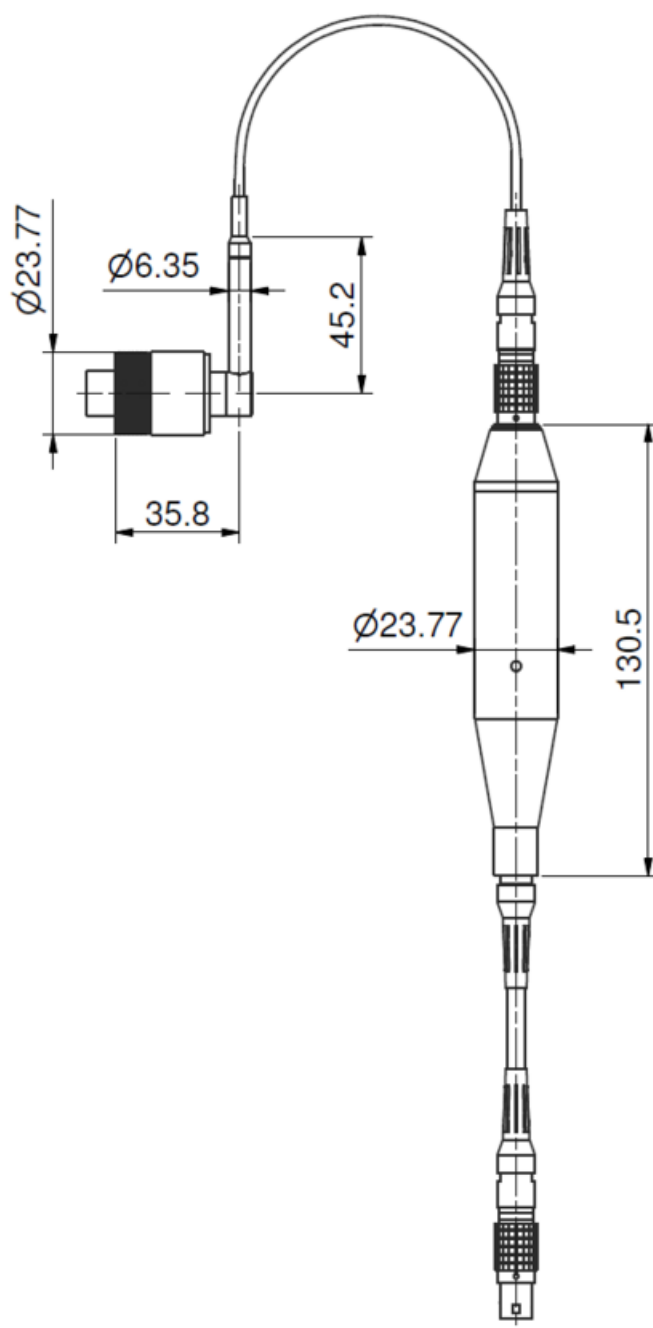
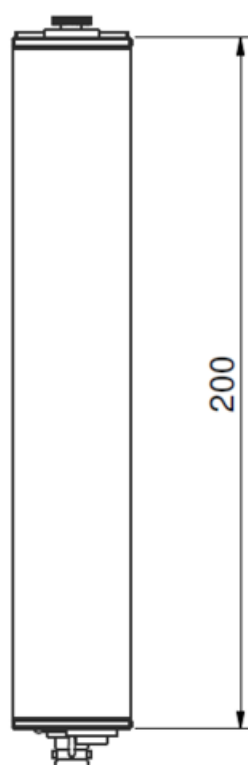
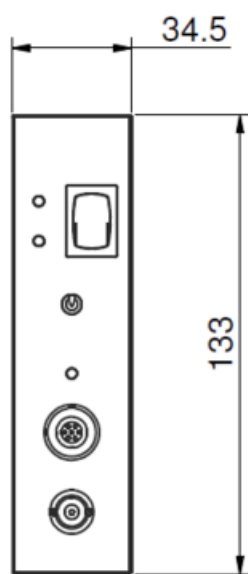


The frequency response is very similar to the standard 60318-4 ear simulator up to 10 kHz

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

Dimensions in mm





## Included Items

|                           |   |
|---------------------------|---|
| GRAS RA0234               | Low-noise Ear Simulator                                   |
| GRAS 40AH                 | 1/2" Ext. Polarized Pressure Microphone, High Sensitivity |
| <a href="#">GRAS 26HG</a> | 1/4" Preamplifier with 3 m Integrated Cable               |
| GRAS 26HT                 | Gain and Filter Unit for 40HT                             |
| <a href="#">GRAS 12HF</a> | 1-Channel Power Module for Low-noise Systems              |

## Accessories

|                             |   |
|-----------------------------|---|
| <a href="#">GRAS 42AA</a>   | Pistonphone, Class 1  |
| <a href="#">GRAS 42AP</a>   | Intelligent Pistonphone, Class 0                                  |
| <a href="#">GRAS RA0090</a> | 94 dB Pistonphone Coupler   |
| GRAS RA0237                 | Straight Ear Canal Extension Kit for KEMAR                        |
| <a href="#">GRAS RA0172</a> | Pinna Holder Kit  |
| <a href="#">GRAS AA0046</a> | 3 m LEMO 7-pin - LEMO 7-pin Cable for Low-noise measuring system  |
| <a href="#">GRAS AA0047</a> | 10 m LEMO 7-pin - LEMO 7-pin Cable for Low-noise measuring system |

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

# 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](http://www.GRASacoustics.com)  
[gras@grasacoustics.com](mailto:gras@grasacoustics.com)

**USA**  
**GRAS SOUND & VIBRATION**  
9290 SW Nimbus Avenue  
Beaverton, OR 97008  
Tel: 503-627-0832  
Toll Free: 800-231-7350  
[www.GRASacoustics.com](http://www.GRASacoustics.com)  
[sales-usa@grasacoustics.com](mailto:sales-usa@grasacoustics.com)

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

[grasacoustics.com](http://grasacoustics.com)

**GRAS**  
An Axiometrix Solutions Brand