

GRAS 40HH

1/2" 低噪音传声器系统



Freq range: 10 Hz to 16 kHz
Dyn range: 6.5 dB(A) to 113 dB
Sensitivity: 800 mV/Pa

GRAS 40HH 1/2" 低噪声传声器系统可以测量接近人类听觉阈值的声压级；即使是非常安静的产品，也非常适合用于声功率测量。它的动态范围非常宽，可测量 20 μ Pa 时低至 6.5 dB 1/3 倍频程频带) 的 20 Hz 至 20 kHz 的声压级。

Typical applications and use

- Very Low Sound pressure measurements
- Low noise product measurements
- Sound power measurements at low sound pressure levels
- Measurements on hard-disk drives, computer products, quiet rooms etc.

The 40HH comprises:

- a special high-sensitive 1/2" GRAS 40AH Condenser Microphone
- a special 1/2" GRAS 26HH Lownoise Preamplifier

The preamplifier and microphone are an individually matched combination. To complete the system, a special single or 10-channel power module is required and is available, i.e. [GRAS 12HF](#) for single-channel measurements or [GRAS 12HM](#) for multi-channel measurements.

The chosen power module provides all necessary voltages for powering the preamplifier(s) as well as polarizing the microphone(s).

Preamplifier

The GRAS 26HH Preamplifier has a built-in overload indicator (which is repeated on the chosen power supply) and a frequency correction facility for both pressure-microphone operation as well as free field microphone operation.

Microphone

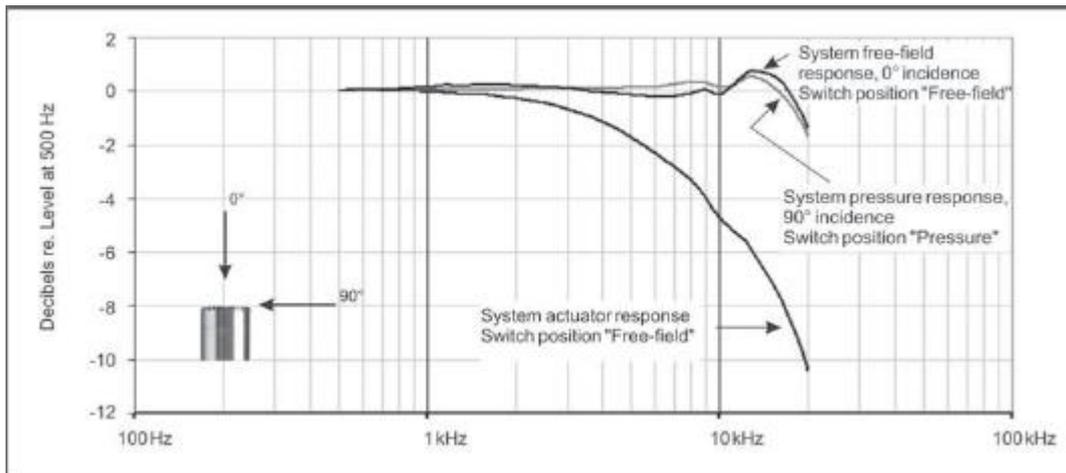
The GRAS 40AH Microphone is an externally polarized microphone with a specially reduced inherent noise floor in order to achieve a high dynamic range and wide frequency range. Its diaphragm is specially tuned to yield high sensitivity coupled with low internal-noise generation.

Frequency Response and Noise Floor

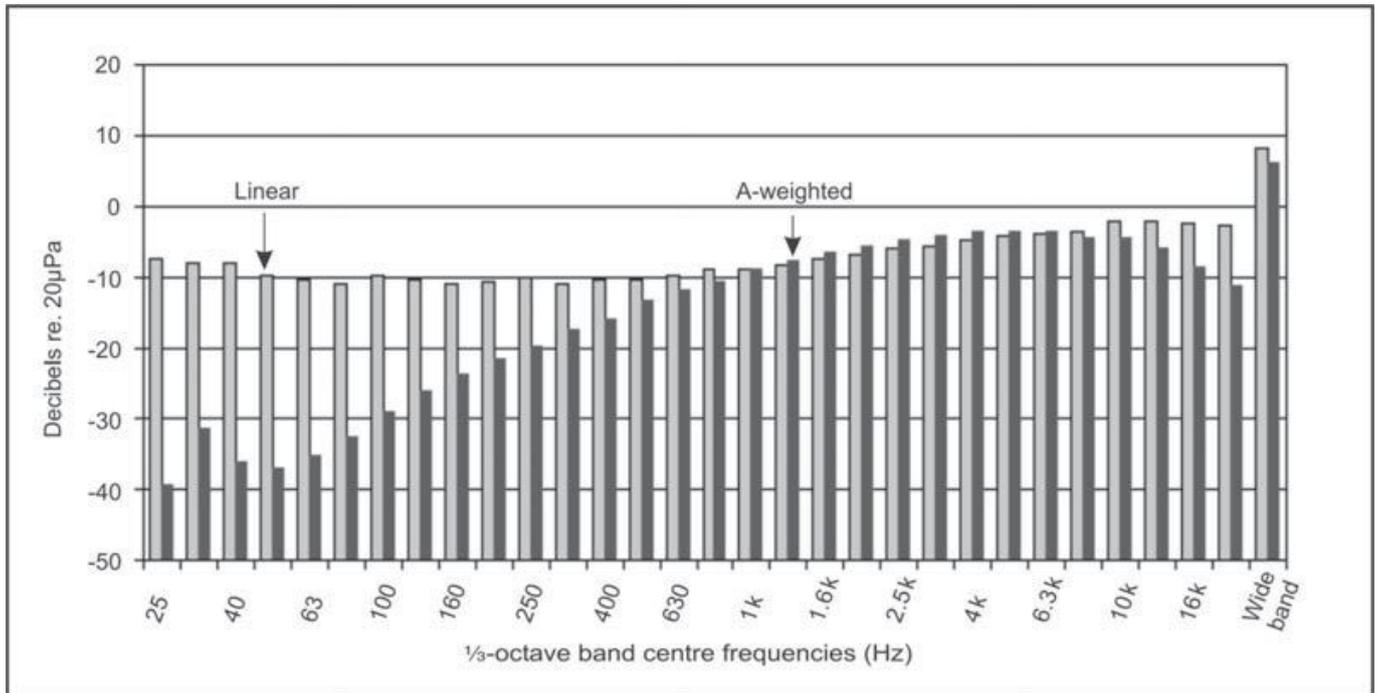
The chosen power supply has a two-position switch

for selecting which microphone operation to use, i.e. pressure or free-field. A typical free-field response for an angle of incidence of 0° is shown in the data sheet when GRAS 40HH is switched to free-field operation. Also shown is a complete low-noise measuring system, a typical noise floor in 1/3-octave bands for both the linear and A-weighted cases.

Frequency range (± 1 dB)	Hz	12.5 to 10k
Frequency range (± 2 dB)	Hz	10 to 16k
Frequency range (± 3 dB)	Hz	6 to 20k
Dynamic range lower limit (microphone thermal noise)	dB(A)	6.5
Dynamic range upper limit	dB	113
Set sensitivity @ 250 Hz (± 2 dB)	mV/Pa	800
Polarization voltage	V	200 V / Traditional
Microphone venting		Rear
Output impedance	Ω	47
Temperature range, operation	$^{\circ}\text{C} / ^{\circ}\text{F}$	-20 to 60 / -4 to 140
Temperature range, storage	$^{\circ}\text{C} / ^{\circ}\text{F}$	-40 to 85 / -40 to 185
CE/RoHS compliant/WEEE registered		Yes/Yes/Yes



Typical frequency response



Typical noise floor shown in 1/3-octave bands - linear and A-weighted cases

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

Included items

GRAS 40AH	High sensitive 1/2" microphone
GRAS 26HH	Lownoise 1/2" preamplifier

Optional items

GRAS 12HF	1-Channel Power Module for Lownoise Systems
GRAS 12HM	10-Channel Power Module for Lownoise Systems
GRAS AM0363	Windscreen for 1" Microphones
GRAS 42AA	Pistonphone, Class 1
GRAS RA0090	Pistonphone Coupler
GRAS AL0006	Tripod
GRAS RA0093	Adjustable, high quality, stainless steel tripod adapter
GRAS RA0095	Dehumidifier for 1" microphones
GRAS AA0046	3 m LEMO 7-pin - LEMO 7-pin Cable for Low-noise measuring system
GRAS AA0047	10 m LEMO 7-pin - LEMO 7-pin Cable for Low-noise measuring system

GRAS Sound & Vibration reserves the right to change specifications and accessories 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
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
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
sales-uk@grasacoustics.com

CHINA

GRAS SOUND & VIBRATION
Room 502, Building T1,
No.1398 Ali Center
Shenchang Road,
Minhang District,
Shanghai, China, 201107
Tel: +86 21 400-888-9826
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 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

www.GRASacoustics.com

GRAS
An Axiometrix Solutions Brand