GRAS 40HT

1/2" 有限空间低噪音传声器系统

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

用于密闭空间的 GRAS 40HT ½ " 低噪音传声器系统的规格与 GRAS 40HH 相似，但专为狭小空间应用而设计。

GRAS Sound & Vibration
Skovlytoften 33, 2840 Holte, Denmark
www.grasacoustics.com

Introduction

GRAS 40HT can measure sound pressure levels below the threshold of human hearing; and is amply suitable for sound-power measurements on even very quiet products. Its very wide dynamic range permits measurements down to below – 2 dB re.20 µPa (in 1/3-octave bands) from 20 Hz to 20 kHz.

Typical applications and use

40 HT is for low sound pressure measurements and very low sound power measurements.

Design

40HT comprises a special high-sensitive ½-inch Condenser Microphone GRAS 40AH, a ¼-inch High-impedance Preamplifier GRAS 26HG with adapter GRAS GR0010 for the ½-inch microphone, and special Gain and Filter Unit GRAS 26HT.

The Gain and Filter Unit and Microphone are an individually-matched combination. To complete the system, a special single or 10-channel power module (available from GRAS) is required, i.e. GRAS 12HF for single-channel measurements or GRAS 12HM for 1 to 10 channel measurements.

Each channel provides all voltages required for 40HT and polarizing its microphone.

The Gain and Filter Unit GRAS 26HT 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

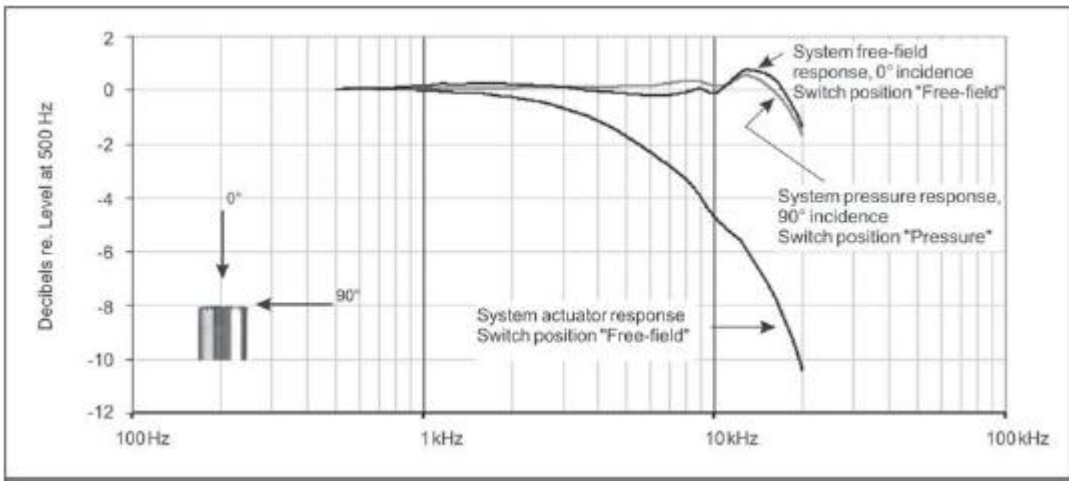
The GRAS 40AH microphone is an externally polarized microphone with a specially reduced inherent noise floor in order to achieve a high dynamic range and wide frequency range. Its diaphragm is specially tuned to yield high sensitivity coupled with low internal-noise generation.

Frequency response and noise floor

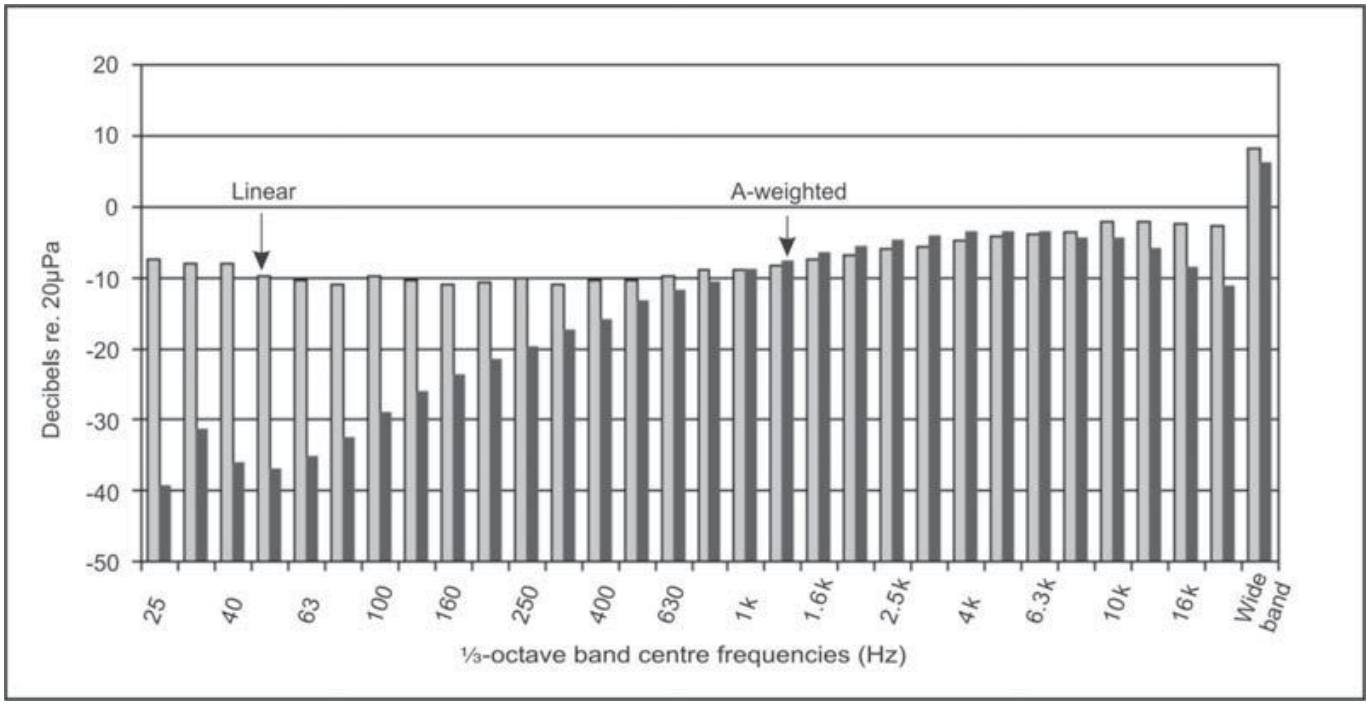
The chosen power supply has a two-position switchfor selecting which microphone operation to use, i.e.pressure or free-field. A typical free-field response for an angle of incidence of 0 ° is shown in the data sheet when the 40HT is switched to free-field operation. Also shown is a complete low-noise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

Specifications

Frequency range (±1 dB)	Hz	12.5 to 10 k
Frequency range (±2 dB)	Hz	10 to 16 k
Frequency range (±3 dB)	Hz	6 to 20 k
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	°C / °F	-20 to 60 / -4 to 140
Temperature range, storage	°C / °F	-40 to 85 / -40 to 185
CE/RoHS compliant/WEEE registered		Yes/Yes/Yes



Typical frequency response



Typical noise floor

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

Included items

GRAS 40AH	High sensitive 1/2" microphone
GRAS 26HT	Gain and filter unit
GRAS 26HG	Lownoise 1/4" preamplifier with adapter for the 1/2" microphone

Optional items

GRAS 12HF	1-Channel Power Module for Lownoise Systems
GRAS 12HM	10-Channel Power Module for Lownoise Systems
GRAS AM0069	Windscreen for 1/2" Microphones
GRAS 42AA	Pistonphone, Class 1
GRAS RA0090	Pistonphone Coupler
GRAS AL0006	Tripod
GRAS RA0096	Adjustable, high quality, stainless steel tripod adapter
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

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GRAS Worldwide

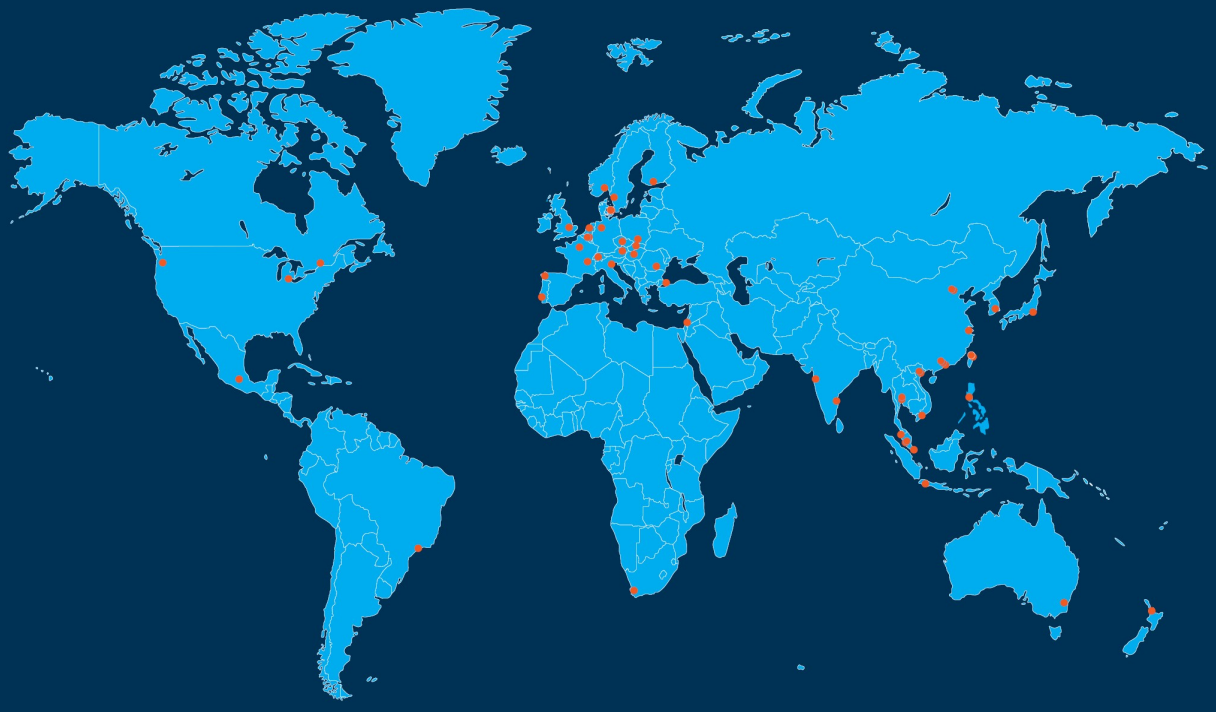
Subsidiaries and distributors in more than 40 countries

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

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