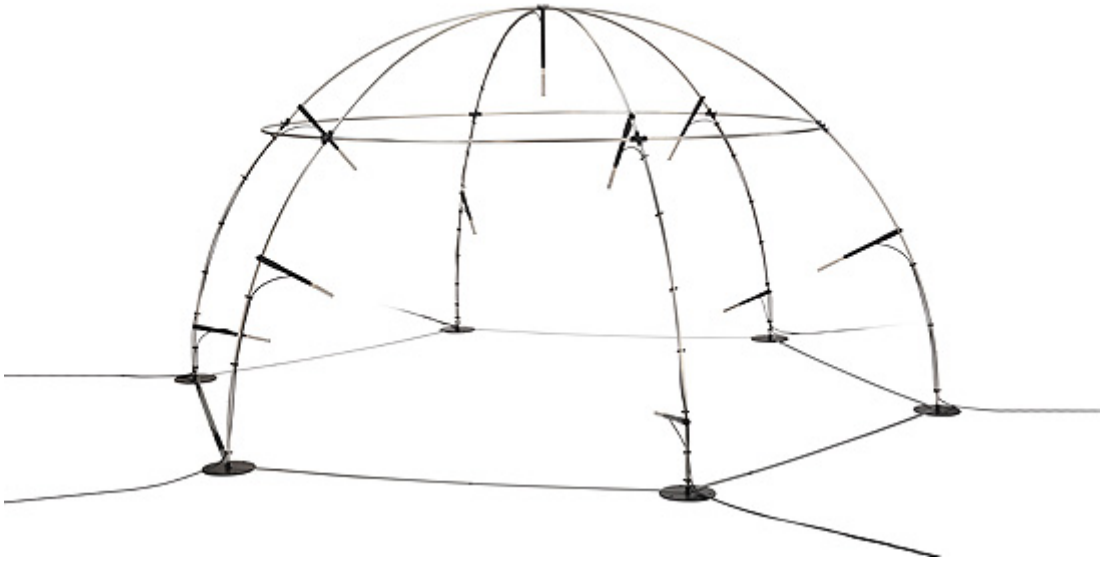
67HB 2 M LEMO LOW-NOISE HEMISPHERE KIT67HB LOW-NOISE



Freq range: 10 Hz to 16 kHz
Dyn range: 6.5 dB(A) to 110 dB
Sensitivity: 850 mV/Pa
Measures incl. feet: Diagonal 4716 mm Height 2283 mm

The GRAS hemispheres will hold and position the measurement microphones according to the standards and have been designed with focus on your workflow; They are very easy to assemble and it is easy to position and access the DUT. Furthermore, in best GRAS tradition they are optimized acoustically for correct and repeatable measurement data.

GRAS Sound & Vibration
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Introduction

The structure is made portable to achieve a high degree of freedom of location. This, combined with the easy, tool-less assembly in minutes, enables you to save expensive anechoic chamber time and to offer on-site sound power diagnostics.

The microphone positions are clearly marked to ease the mounting and maintain measurement repeatability.

The GRAS 67HB-07 2 m LEMO Low-noise Hemisphere kit, 4 channels (4 key + 4 secondary) is ISO 3746:2011 B1/ANSI S12.56 compliant and includes:

- 1x Hemisphere structure
- 4x GRAS 40HL 1/2” LEMO Low-noise Microphone Sets, cables, holders

The GRAS 67HB-08 2 m LEMO Low-noise Hemisphere kit, 10 channels (10 key + 10 secondary) is ISO 3744:2010 B2/ANSI S12.54 compliant and includes:

- 1x Hemisphere structure
- 10x GRAS 40HL 1/2” LEMO Low-noise Microphone Sets, cables, holders

The GRAS 67HB-09 2 m LEMO Low-noise Hemisphere kit, 20 channels (20 key) is ISO 3745:2012 E2/ANSI S12.55 compliant and includes:

- 1x Hemisphere structure
- 20x GRAS 40HL 1/2” LEMO Low-noise Microphone Sets, cables, holders

Typical applications and use

Depending on the size and the emitted acoustic level of the DUT, the hemispheres will allow sound power measurements on everything from small-sized personal electrics to office machines and IT products, household appliances, power tools, and smaller engines. The only restriction is, that the characteristic dimension of the DUT may be no more than half the measurement radius.

Design

The hemispheres are available as preconfigured kits with 4, 10 or 20 microphone sets in 3 variations; CCP, LEMO and low-noise LEMO. In the table to the right, you will be able to find the hemisphere kit that suits your type of input module along with dynamic specifications for your application. The pre-configured hemispheres are delivered with microphone set holders that will fit all 3 microphone types. Respective cables and cable clips are included and everything is delivered in high-quality flight cases.

The recommended microphone sets can be connected directly to all professional measurement systems and are available for both CCP and 7-pin LEMO inputs. If your system platform supports intelligent transducers according to IEEE 1451.4 (TEDS), the system can be set up to identify the microphone properties and position in the array.

Calibration

All included microphone sets are delivered with individual calibration charts including sensitivity values and frequency responses. These sensitivity values can be used directly in your system setup.

For frequent measurement chain verification, a reference sound source will be required. GRAS supplies 114 dB types for the standard microphone sets and a special 94 dB adapter for the low-noise sets. Depending on the use and your internal quality control requirements we recommend that the sets are re-calibrated at least every second year.

Performance and warranty

GRAS microphone sets are made of components from our proven standard portfolio and are all manufactured of high-quality material and branded parts that were chosen and processed to ensure life-long stability and robustness.

All parts are manufactured and assembled at the factory in Denmark by skilled and dedicated operators in a verified clean-room environment. The microphone diaphragm, body, and unique protection grid are made of high-grade stainless steel and make the microphone set resistant to physical damage as well as corrosion caused by aggressive air or gasses.

This, together with the reinforced gold-plated microphone terminal which guarantees a highly reliable connection, enables us to offer 5 years warranty against defective materials and workmanship. The warranty for cables is 6 months.

Frequency range (±2 dB)	Hz	10 to 16 k
Dynamic range lower limit with GRAS preamplifier	dB(A)	6.5
Dynamic range upper limit with GRAS preamplifier @ +28 V / ±14 V power supply	dB	110
Set sensitivity @ 250 Hz (±2 dB)	mV/Pa	850
IEC 61094-4 Compliance		WS2F
ANSI standard		S12.56
Standard		ISO 3746:2012
Weight	g / oz	15,000 / 529.1

Available configurations

GRAS 67HB-07	2 m LEMO Low-noise Hemisphere kit 4 ch.
GRAS 67HB-08	2 m LEMO Low-noise Hemisphere kit 10 ch.
GRAS 67HB-09	2 m LEMO Low-noise Hemisphere kit 20 ch.

Included

-	2 m structure
-	Microphone holders (1 per ch.)
GRAS 40HL	1/2" LEMO Low-noise Microphone Set (1 per ch.)
GRAS AA0009	10 m LEMO cable

Optional

GRAS RA0277	Flight cases (2): One with foam tailored for the microphones and cables One with foam tailored for the structure and microphone holders
GRAS 42AP	Intelligent Pistonphone (114 dB)
GRAS RA0090	Pistonphone coupler (94 dB)

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

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 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

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