

# GRAS 43AC-S4

High-Frequency Ear Simulator  
Kit LEMO



Freq range: 3.15 Hz to 20 kHz  
Dyn range: 25 dB(A) to 138 dB  
Sensitivity: 50 mV/Pa  
Use: For general acoustic diagnostics

The GRAS 43AC-S4 Ear Simulator Kit is a complete test-jig for high-frequency acoustical measurements up to 20 kHz on earphones coupled to the ear by inserts such as tubes and ear moulds.

The GRAS 43AC-S4 Ear Simulator Kit is a complete test jig for acoustically testing earphones coupled to the ear via inserts such as tubes and ear moulds and complies with the following international requirements:

- IEC 60318-4: Occluded-ear simulator for the measurement of earphones coupled to the ear by ear inserts.

43AC-S4 uses the RA0401 High-Frequency Ear Simulator which extends the useful frequency range to 20 kHz. Read more about the RA0401 [here](#).

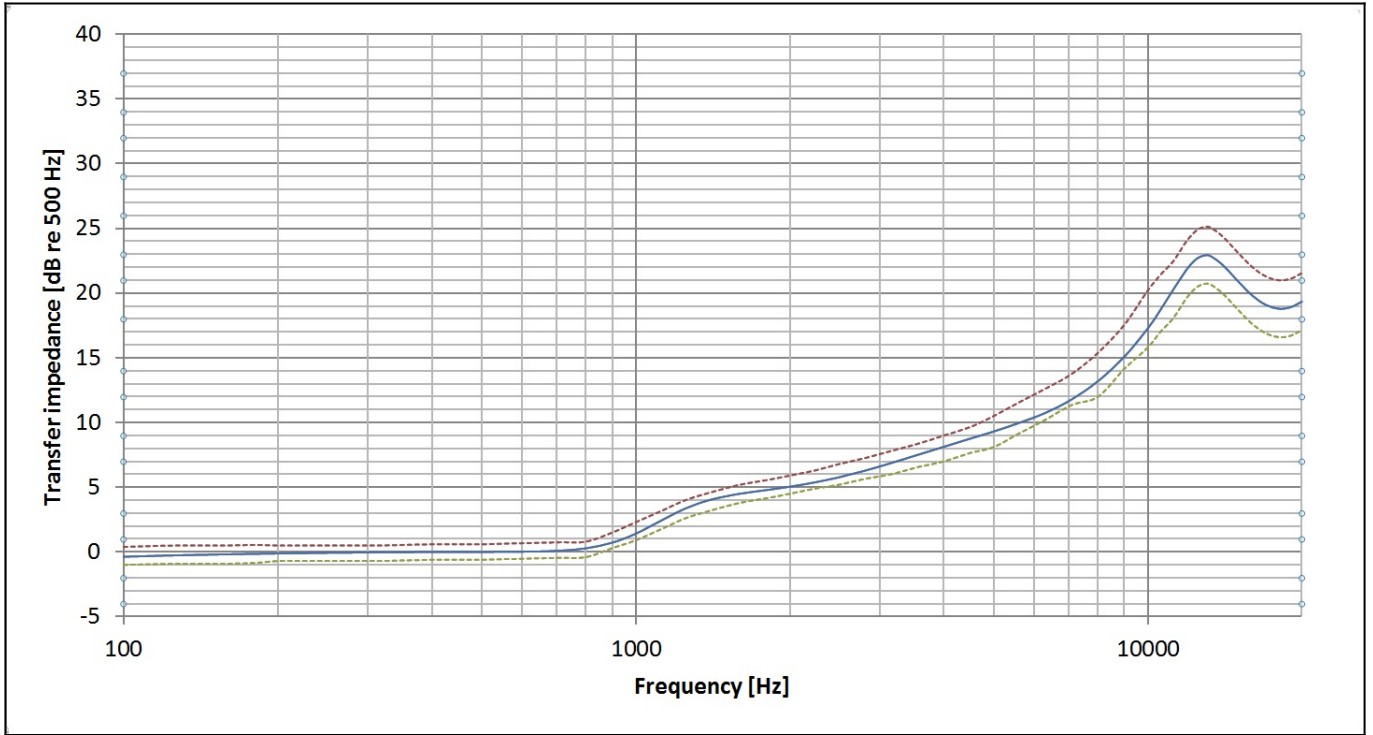
The 43AC comprises:

- [GRAS RA0401](#) Externally Polarized High-Frequency Ear Simulator
- [GRAS 40AG](#) 1/2" Pressure Microphone (included in RA0401)
- GRAS 26AC 1/4" Preamplifier
- [GRAS RA0001](#) Right-angled Adapter
- [GRAS RA0052 Test Jig](#)

The Test Jig has an adjustable spring-loaded arm to exert a variable force on the test object.

A prepolarized version is available, [GRAS 43AC-S5](#).

Theoretical dynamic range lower limit with GRAS preamplifier	dB(A)	25
Theoretical dynamic range upper limit with GRAS preamplifier @ +28 V / ±14 V power supply	dB	153
Theoretical dynamic range upper limit with GRAS preamplifier @ +120 V / ±60 V power supply	dB	164
Set sensitivity @ 250 Hz (±2 dB)	mV/Pa	12
Set sensitivity @ 250 Hz (±2 dB)	dB re 1V/Pa	-38.5
Coupler volume	mm <sup>3</sup>	1260 @ 500 Hz
Resonance frequency	kHz	13.5
Temperature range, operation	°C / °F	-30 to 60 / -22 to 140
Temperature coefficient @250 Hz	dB/°C / dB/°F	-0.01 / -0.006
Humidity range non condensing	% RH	0 to 75
ANSI standard		S3.7
IEC standard		60318-4 (former 60711)
CE/RoHS compliant/WEEE registered		Yes/Yes/Yes
Connector type		3 m 7-pin LEMO
Weight	g / oz	1550 / 54.675



Typical frequency response for RA0401

## Included

GRAS RA0401	High-Frequency Ear Simulator, including 40AG microphone (ext. polarized)
GRAS 26AC	¼" Preampifier
GRAS RA0001	Right Angled Adapter
<a href="#">GRAS RA0052</a>	Test Jig
GRAS GR0435	In-ear Adapter
GRAS GR0436	Tube stud
GRAS GR0437	Ear-mould Simulator
GRAS GR0438	Union nut
GRAS GR0440	Tube stud
GRAS GR0433	Calibration Adapter
GRAS GR0434	Stop Washer
GRAS MI0070	Cord 0.2 m

## Optional

<a href="#">GRAS 12AK</a>	Power Module
<a href="#">GRAS 42AA</a>	Pistonphone

## Miscellaneous

<a href="#">GRAS RA0196</a>	High-tension springs (set of two)
-----------------------------	-----------------------------------

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

# GRAS Worldwide

Subsidiaries and distributors in more  
than 40 countries

GRAS SOUND & VIBRATION A/S  
Skovlytoften 33  
2840 Holte  
Denmark  
Tel: +45 4566 4046  
gras@gras.dk

GRAS SOUND & VIBRATION USA  
2234 East Enterprise Parkway  
Twinsburg, OH 44087  
United States  
Tel: +1 330 425 1201  
sales@gras.us

GRAS SOUND & VIBRATION UK  
Building 115  
Bedford Technology Park Thurleigh,  
MK44 2YA Bedford  
United Kingdom  
Tel: +44 1234 639552  
sales@gras.co.uk

GRAS SOUND & VIBRATION CHINA LTD.  
Rm 1606, Kodak House II  
No. 39 Healthy Street East North Point  
Hong Kong  
China  
Tel: +852 2833 9987  
sales@gras.com.cn



## 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