

# GRAS 43AA

Ear Simulator Kit According to  
IEC 60318-1 & -2



Connection: 200 V/LEMO  
Volume: Complex  
Dyn range: 25 dB(A) to 164 dB  
ANSI: S3.7  
IEC: 60318-1 & -2

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The GRAS 43AA Ear Simulator Kit is a complete test jig for acoustical measurements on telephone handsets and earphones. It includes an IEC 60318 Ear Simulator RA0039 which is individually calibrated according to the ITU-T Recommendation P.57 (08/96) "Series P: Telephone transmission quality, objective measuring apparatus: artificial ears."

The GRAS 43AA is a complete test jig for acoustical measurements on telephone handsets and earphones in accordance with:

- IEC60318-1 & -2 Electroacoustics – Simulators of human head and ear – Part 1: Ear simulator for the calibration of supraaural earphones, 1998-07
- ITU-T Recommendation P.57 (08/96) Series P: Telephone transmission Quality, Objective measuring apparatus: Artificial Ears

It consists of the following components:

- IEC 60318-1 & -2 [GRAS RA0039 Ear Simulator](#)
- [GRAS 40AG ½" Pressure Microphone](#)
- GRAS 26AC ¼" Preamplifier
- [GRAS RA0052 Test Jig](#)
- Mounting plates for circum-aural and supra-aural headphones

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

A prepolarized version is available, [GRAS 43AA-S2](#).

A version with a [GRAS 26AB](#) Preamplifier is available, [GRAS 43AA-S3](#).

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
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 80
ANSI standard		S3.7
ITU-T recommondations		P.57 Type 1
CE/RoHS compliant/WEEE registered		Yes/Yes, Yes
Connector type		3 m 7-pin LEMO
Weight	g / oz	1.65 / 58.202

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

## Included

<a href="#">GRAS RA0039</a>	IEC 318 Ear Simulator
<a href="#">GRAS 40AG</a>	½" Pressure Microphone, Wide Frequency
GRAS 26AC	¼" Preamplifier
<a href="#">GRAS RA0052</a>	Test Jig
GRAS GR0339	Circum-aural plate

## Optional

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

## Miscellaneous

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

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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 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