

# 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

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
Coupler volume	mm <sup>3</sup>	0.4 ccm
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 recommendations		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
Specification Conditions		GRAS Sound & Vibration reserves the right to change specifications and accessories without notice.

## Included

GRAS RA0039	IEC 318 Ear Simulator
GRAS 40AG	½" Pressure Microphone, Wide Frequency
GRAS 26AC	¼" Preampifier
GRAS RA0052	Test Jig
GRAS GR0339	Circum-aural plate

## Optional

### Power supply

GRAS 12AK	Power Module
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### Calibration source

GRAS 42AA	Pistonphone
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### Miscellaneous

GRAS RA0196	High-tension springs (set of two)
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# | We Make Microphones

## Tradition

Since the establishment in 1994, GRAS has been 100% dedicated to developing and manufacturing high-quality measurement microphones and related acoustic equipment.

## Innovation

We work with everybody with an interest in sound or noise within the fields of aerospace, automotive, audiology, consumer electronics, noise monitoring, building acoustics and telecommunications.

## Quality

At GRAS we know that in order for you to trust your measurement results; signal quality, stability and robustness are essentials. We design and build them to perform under real life conditions – and beyond.

