

# GRAS 43AC-S7

Hi-Res Ear Simulator Kit CCP



Connection: 0 V/CCP  
Volume: 1260 @ 500 Hz  
Dyn range: 25 dB(A) to 153 dB  
ANSI: S3.7  
IEC: 60318-4

The GRAS 43AC-S7 Ear Simulator Kit with TEDS is a complete test-jig for hi-res measurements up to 50 kHz on earphones coupled to the ear by inserts such as tubes and earmolds.

The GRAS 43AC-S7 Ear Simulator Kit is a complete test jig for acoustically testing earphones coupled to the ear via inserts such as tubes and ear molds and is compatible with the following international requirements:

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

43AC-S7 uses the RA0404 Hi-Res Ear Simulator which extends the useful frequency range to 50 kHz. Read more about the RA0404 [here](#).

The 43AC-S7 comprises:

- [GRAS RA0404](#) Prepolarized Hi-Res Ear Simulator
- [GRAS 40BD](#) 1/2" Pressure Microphone (included in RA0404)
- [GRAS 26CB](#) 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.

An externally polarized version is available, [GRAS 43AC-S6](#).

## TEDS Compatibility

43AC-S7 is IEEE 1451.4 TEDS v. 1.0 compliant. If your measurement platform supports Transducer Electronic Data Sheets (TEDS), you will be able to read and write data like properties and calibration data.

|   |                 |                        |
|---|-----------------|------------------------|
| Theoretical dynamic range lower limit with GRAS preamplifier                              | dB(A)           | 44                     |
| Theoretical dynamic range upper limit with GRAS preamplifier @ +28 V / ±14 V power supply | dB              | 166                    |
| Set sensitivity @ 250 Hz (±2 dB)  | mV/Pa           |                        |
| Set sensitivity @ 250 Hz (±2 dB)  | dB re 1V/Pa     |                        |
| Set sensitivity @ 250 Hz (±3 dB)  | mV/Pa           | 1,6                    |
| 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  |                 | Microdot 10/32         |
| Weight  | g / oz          | 1550 / 54.675          |

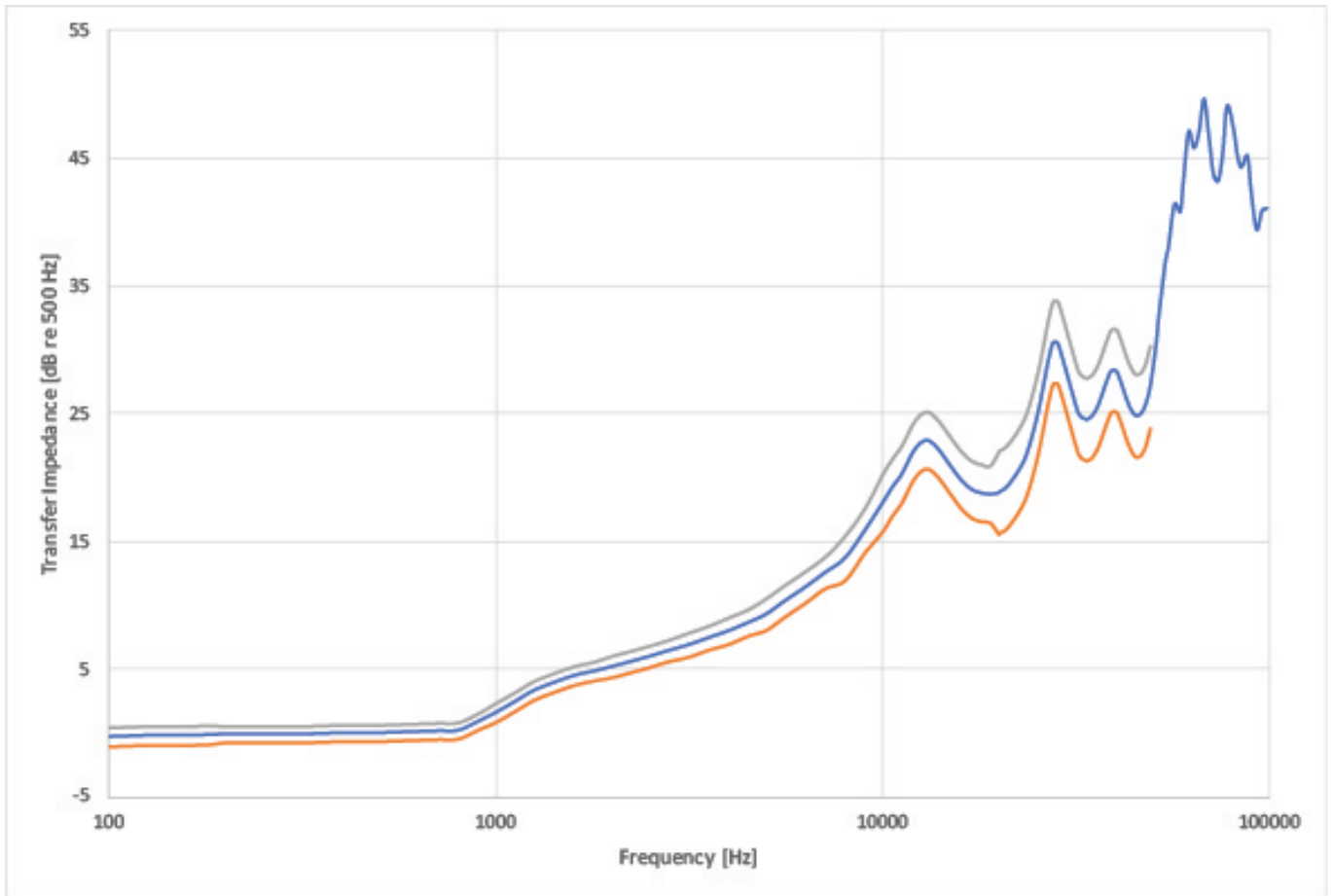


Fig 1. The transfer impedance of a typical RA0404 Hi-Res Ear Simulator with tolerances. Up to 10 kHz, the response is within the limits defined by IEC 60318-4. Above 10 kHz, the response is within a fairly tight tolerance band up to 50 kHz

## Included

|                             |                                     |
|-----------------------------|-------------------------------------|
| <a href="#">GRAS RA0404</a> | Hi-Res Ear Simulator (prepolarized) |
| <a href="#">GRAS 26CB</a>   | ¼" Preamplifier                     |
| 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

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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 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](http://www.grasacoustics.com)

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