

# GRAS 44AA

Mouth Simulator according to ITU-T Rec. P51 with built-in power amplifier



ITU-T rec.: P.51

Special feature: Built-in power amplifier

GRAS 44AA Mouth Simulator is a sound source that simulates the sound field around the human mouth at close quarters and complies with the Standards IEEE 269, 661 and ITU-T Rec. P51.

GRAS 44AA is for testing telephone mouthpieces as well as other microphones similarly used in communication networks.

## GRAS 44AA and 44AA-1

At the mouth reference point (MRP), which is 25 mm from the detachable lip ring (35 mm from the mouth of the GRAS 44AA/AA-1), the maximum continuous signal it can produce in  $\frac{1}{3}$ -octave bands is 100 dB re. 20  $\mu$ Pa in the frequency range of 100 Hz to 16 kHz. Its loudspeaker accepts an external signal either directly or via its own built-in power amplifier (when power is applied). The box includes an AC mains to 24 VDC power supply to power the built-in amplifier inside the 44AA and 44AA-1.

Jigs are included for calibration according to CCITT P.51 and IEEE 269. These are for use with  $\frac{1}{4}$  or  $\frac{1}{2}$  microphones. One jig holds the microphone at 0° incidence ( $\frac{1}{4}$  only) to the sound source, the other at 90° incidence ( $\frac{1}{4}$  or  $\frac{1}{2}$ ).

44AA-1 is a special version of 44AA with the BNC connector positioned on the opposite side for proper mounting on the GRAS 45CC Test Fixture.

NOTE: This type of mouth simulator can not be mounted inside a KEMAR head.

# Specifications

**GRAS 44AA Mouth Simulator  
according to ITU-T Rec. P51 with  
built-in power amplifier**

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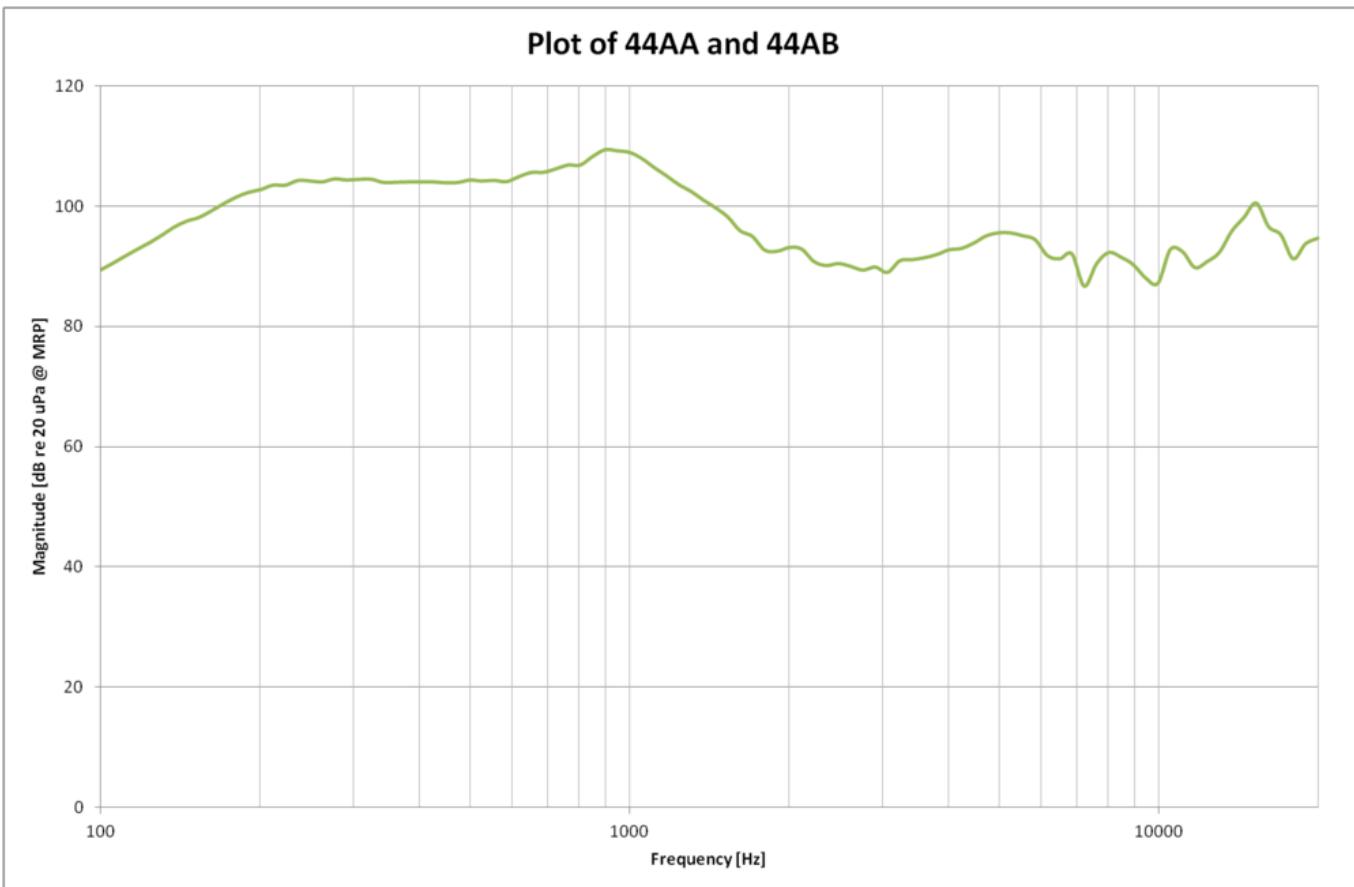
ITU-T recommendations		P.51
Connector type		BNC
IEEE standard		269, 661
Input impedance	kΩ	20
Maximum power, continuous	W	10
Maximum power, pulsed 2 sec.	W	50
Temperature range, operation	°C / °F	10 to 35 / 50 to 95
Gain	dB	10
Input signal, max.	Vrms	2
CE/RoHS compliant/WEEE registered		Yes/Yes/Yes
Weight	g / oz	1050 / 37.038

## Built-in power amplifier

Maximum continuous output level at MRP [200 Hz - 6 kHz] 110 dB re. 20 Pa

Maximum continuous output level at MRP [100 Hz - 16 kHz] 100 dB re. 20 Pa

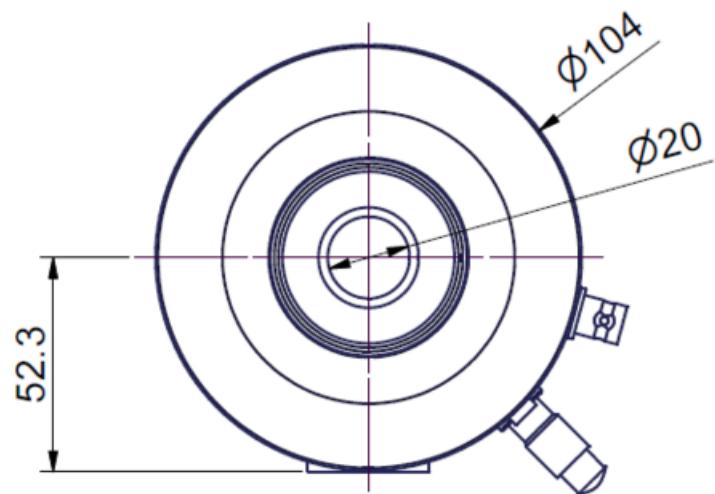
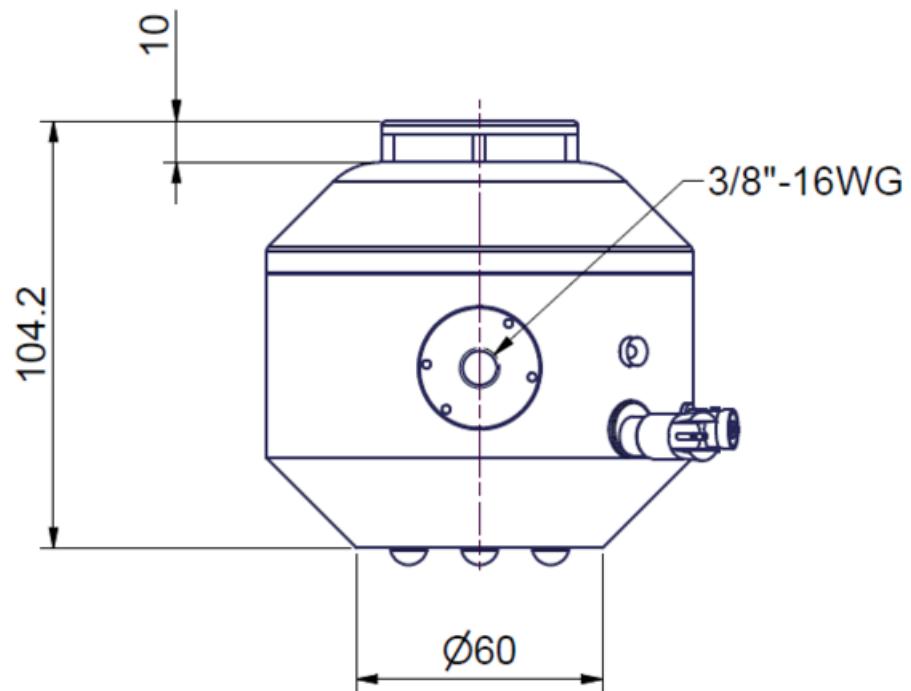
Distortion 250 Hz - 8 kHz (Linear signal @ 94 dB at MRP) typically 1 %, max. 1.5 %



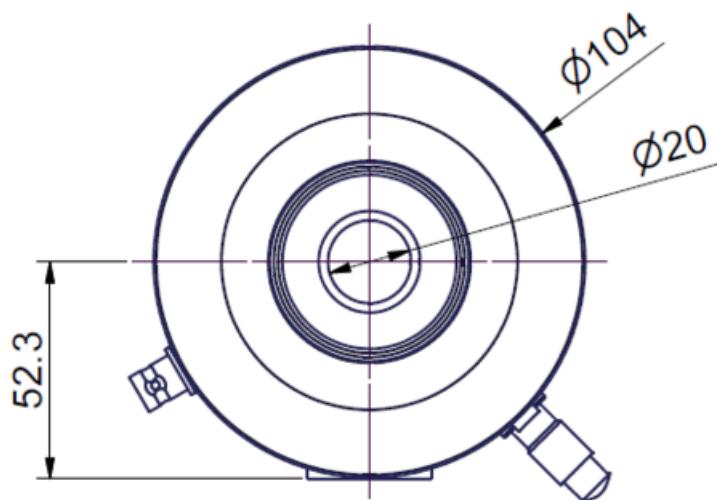
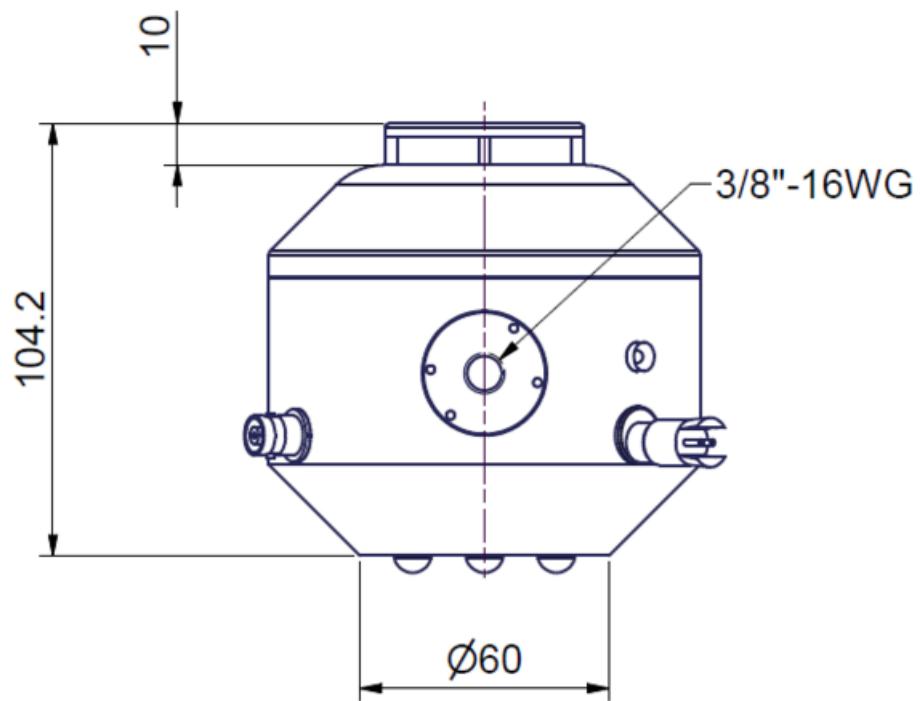
Frequency response

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

44AA



44AA-1



## Included

GRAS RA0104 Jig (CCITT P51)

GRAS RA0105 Jig (IEEE 269)

AB0012 24 VDC Power supply

## Optional

GRAS RA0110 Conical mouthpiece

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

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