

# GRAS 45BC-15

KEMAR

Hi-Res

2 LEMO



200 V/LEMO

2

ANSI: S3.36, S3.25

IEC: 60318-4, in accordance with 60318-7

ITU-T Rec. P.57 Type 3.3 ITU-T Rec. P.58

45BC-15 KEMAR

45BC-15

KEMAR

CCP

[GRAS 45BC-16](#)

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KEMAR

KEMAR      Knowles 1972      (  
[KEMAR.us](http://KEMAR.us)      )      ANSI  
 S3.36/ASA58-2012 IEC 60318-7:2011

KEMAR      KEMAR      GRAS

supra-aural      circumaural

KEMAR  
DUT

45BC KEMAR      45BC KEMAR  
 KEMAR      45BC KEMAR  
 KEMAR

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45BC-15      KEMAR      50 kHz      45BC-15 KEMAR

USB

45BC-15      GRAS RA0403  
 KB5000/KB50001  
 GRAS      ITU-T P51  
 1/3      100 dB      20 µPa      100 Hz      16  
 kHz

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KEMAR

2

KEMAR      5      6

*Hi-Res*  
 RA0403 Hi-Res

RA0403 Hi-Res      IEC60318-4      10 kHz      13.5  
 kHz      20 kHz      IEC60318-4  
 IEC60318-4      10 kHz      20 kHz      ± 2.2 dB  
 20 kHz      50 kHz      ± 3.2 dB  
 THD

IEC 60318-4 ITU-T P.57

[GRAS 40BP](http://GRAS 40BP) 1/2

RA0403 \_\_

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35 Shore

Set sensitivity @ 250 Hz ( $\pm 2$ dB)	mV/Pa	1.6
Theoretical dynamic range lower limit with GRAS preamplifier	dB(A)	44
Theoretical dynamic range upper limit with GRAS preamplifier @ +120 V / $\pm 60$ V power supply	dB	169
Resonance frequency	kHz	13.5
Temperature range, operation	°C / °F	-30 to 60 / -22 to 140
Temperature range, storage	°C / °F	-40 to 65 / -40 to 149
Humidity range non condensing	% RH	0 to 95%
ANSI standard		S3.36, S3.25
IEC standard		60318-7
ITU-T recommendations		P. 58
Weight	g / oz	11.45 k / 404
MOUTH SIMULATOR		
Output impedance	Ω	8
Maximum power, continuous	W	10
Maximum power, pulsed 2 sec.	W	50
Input impedance	kΩ	20
Gain	dB	10
Input signal, max.	Vrms	2
Power supply, external	Vdc	24



<a href="#">GRAS 45BC</a>	KEMAR Head & Torso with GRAS mouth simulator, non-configured
<a href="#">GRAS KB5000</a>	KEMAR Large Right Anthropometric Pinna 35 Shore 00
<a href="#">GRAS KB5001</a>	KEMAR Large Left Anthropometric Pinna 35 Shore 00
GRAS GR0408	External Ear Canal (for calibration, 2 pcs)
GRAS GR0409	Union Nut (for GR0408, 2 pcs)
GRAS GR1874	Ear Simulator Holder (2 pcs)
<a href="#">GRAS RA0403</a>	Hi-Res Ear Simulator (2 pcs)
GRAS 26AS-S3	1/4" Standard Preamplifier with 0.4 m cable, Short (2 pcs)
<a href="#">GRAS GR0010</a>	Adapter for 1/2" Microphone and 1/4" Preamplifier (2 pcs)
<a href="#">GRAS AA0008</a>	3 m LEMO 7-pin - LEMO 7-pin Cable (2 pcs)
<a href="#">GRAS 46BP-1</a>	1/4" LEMO Pressure Standard Microphone Set (for calibration of mouth)



## Power Modules for Externally Polarized Ear Simulators and Microphones

<a href="#">GRAS 12AA</a>	2-Channel Power Module with gain, filters and SysCheck generator
<a href="#">GRAS 12AR</a>	2-Channel Power Module
<a href="#">GRAS 12AQ</a>	2-Channel Universal Power Module with signal conditioning and PC interface

## For Ear Simulator Calibration

<a href="#">GRAS 42AP</a>	Intelligent Pistonphone (250 Hz or 251.2 Hz, 114 dB +/- 0.05 dB)
<a href="#">GRAS 42AA</a>	Pistonphone (250 Hz, 114 dB +/- 0.08 dB)
GRAS 42AG	Multifunction Sound Calibrator, Class 1

## Pinna Simulators

<a href="#">GRAS KB0060</a>	KEMAR Small Right Ear 55 Shore 00
<a href="#">GRAS KB0061</a>	KEMAR Small Left Ear 55 Shore 00
<a href="#">GRAS KB0065</a>	KEMAR Large Right Ear 55 Shore 00
<a href="#">GRAS KB0066</a>	KEMAR Large Left Ear 55 Shore 00
<a href="#">GRAS KB1060</a>	KEMAR Small Right Ear, 35 Shore 00
<a href="#">GRAS KB1061</a>	KEMAR Small Left Ear 35 Shore 00
<a href="#">GRAS KB1065</a>	KEMAR Large Right Ear 35 Shore 00
<a href="#">GRAS KB1066</a>	KEMAR Large Left Ear 35 Shore 00
<a href="#">GRAS KB0090</a>	KEMAR Large Right Ear (VA-Style/SQ) 55 Shore 00
<a href="#">GRAS KB0091</a>	KEMAR Large Left Ear (VA-Style/SQ) 55 Shore 00
<a href="#">GRAS KB1090</a>	KEMAR Large Right Ear (VA-Style) 35 Shore 00
<a href="#">GRAS KB1091</a>	KEMAR Large Left Ear (VA-Style) 35 Shore 00

## Ear Mould Simulators

<a href="#">GRAS KB0110</a>	Ear Mould Simulator for 2 mm inner diameter tubing
<a href="#">GRAS KB0111</a>	Ear Mould Simulator for 3 mm inner diameter tubing

## Ear Canal Extension and Microphone Holder Kits (kits with 2 pcs and O-rings)

<a href="#">GRAS RA0237</a>	Straight Ear Canal Extension Kit for KEMAR
<a href="#">GRAS RA0238</a>	VA-tapered Ear Canal Extension Kit for KEMAR
<a href="#">GRAS RA0239</a>	Ear Canal Extension Kit w. silicone lining for KEMAR
<a href="#">GRAS RA0240</a>	Holder for long 1/2" microphone Kit for KEMAR
<a href="#">GRAS RA0241</a>	Holder for short 1/2" microphone Kit for KEMAR
<a href="#">GRAS RA0243</a>	Holder for 1/4" microphone Kit for KEMAR

GRAS RA0244	O-ring kit for KEMAR, 2 pcs.
GRAS RA0249	Straight Ear Canal Extension Kit for KEMAR, made of POM, for binaural hearing aid test
GRAS RA0250	Tapered Ear Canal Extension Kit for KEMAR, made of POM, for binaural hearing aid test

## KEMAR Retrofit Kit for Binaural Hearing Aid Test

<a href="#"><u>GRAS RA0251</u></a>	KEMAR Retrofit Kit for Binaural Hearing Aid Test. The Kit includes Ear Holder Plates, mounting bolts and the RA0249 and RA0250 Ear Canal Extension Kits. Included items are made of POM, Nylon and Teflon.
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## Extension Cables

<a href="#"><u>GRAS AA0008</u></a>	LEMO 7-pin - LEMO 7-pin Cable, 3 m
<a href="#"><u>GRAS AA0009</u></a>	LEMO 7-pin - LEMO 7-pin Cable, 10 m

## Flight Case

GRAS KM0094	PELI Case for KEMAR
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## Simulation Model of KEMAR

GRAS KB3000	3D Simulation Model of KEMAR with large pinnae, stp file
GRAS KB3001	3D Simulation Model of KEMAR with small pinnae, stp file
GRAS KB3002	3D Simulation Model of KEMAR with anthropometric pinnae, stp file

## Stand for KEMAR

GRAS AL0026	Stand for KEMAR, Ø 35 mm
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## Miscellaneous (included in 45BC)

GRAS KB0000	KEMAR Handbook
GRAS KB0010	T-Shirt for KEMAR

GRAS Sound & Vibration

# 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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