

# GRAS 45BC-4

KEMAR

1 CCP



(0 V/CCP)

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ANSI S3.36, S3.25

IEC 60318-4 (formerly 60711), 60318-7  
(formerly 60959)

45BC-4 KEMAR	TEDS	1-Ch CCP	IEC
60318-4	KEMAR		45BC-4
<a href="#">KEMAR</a>	45EA	LEMO	<a href="#">GRAS 45BC-3</a>
	1	LEMO	

45EA  
 KEMAR Knowles 1972 ( 45EA  
[KEMAR.us](#) ) ANSI  
 S3.36/ASA58-2012 IEC 60318-7:2011 KEMAR KEMAR  
 KEMAR KEMAR GRAS [45EA Handset Positioning System.](#)

45BC KEMAR 45BC KEMAR  
 KEMAR 45BC KEMAR  
 KEMAR

**TEDS**

CCP KEMAR IEEE 1451.4 TEDS v. 1.0  
 TEDS KEMAR 2 5 6

45BC-4 KEMAR  
 45EA

45BC-4 USB

45BC-4 GRAS RA0045-S1 60318-4  
 KB1065/KB1066 45EA

GRAS ITU-T P51

1/3 100 dB 20 µPa 100 Hz 16  
 kHz

60318-4

RA0045-S1

IEC 60318-4 ITU-T P.57

[RA0045-S1](#)

KB0065/KB0066

KB0065 KB0066 35 Shore 00 IEC  
 ITU-T

Connector type		BNC
Set sensitivity @ 250 Hz ( $\pm 2$ dB)	mV/Pa	12.5
Set sensitivity @ 250 Hz ( $\pm 2$ dB)	dB re 1V/Pa	-38.5
Theoretical dynamic range lower limit with GRAS preamplifier	dB(A)	25
Theoretical dynamic range upper limit with GRAS preamplifier @ +28 V / $\pm 14$ V power supply	dB	151
Theoretical dynamic range upper limit with GRAS CCP preamplifier	dB	146
Resonance frequency	kHz	13.5
Temperature range, operation	$^{\circ}\text{C}$ / $^{\circ}\text{F}$	-30 to 60 / -22 to 140
Temperature range, storage	$^{\circ}\text{C}$ / $^{\circ}\text{F}$	-40 to 65 / -40 to 149
Humidity range non condensing	% RH	0 to 95
ANSI standard		S3.36, S3.25
IEC standard		60318-4 (former 60711), 60318-7 (former 60959)
ITU-T recommendations		P.380
Weight	g / oz	11.45 k / 404
MOUTH SIMULATOR		.
Output impedance	$\Omega$	8
Maximum power, continuous	W	10
Maximum power, pulsed 2 sec.	W	50

## GRAS Sound & Vibration



<a href="#">GRAS 45BC</a>	KEMAR Head & Torso with GRAS mouth simulator, non-configured
<a href="#">GRAS KB1065</a>	KEMAR Large Right Ear 35 Shore 00
<a href="#">GRAS KB1066</a>	KEMAR Large Left Ear 35 Shore 00
GRAS RA0237	Straight Ear Canal Extension Kit for KEMAR (2 pcs)
<a href="#">GRAS RA0045-S1</a>	IEC 60318-4 Ear Simulator, Prepol. version
GRAS 26CS	1/4" CCP Standard Preamplifier with 0.4 m cable, Short
<a href="#">GRAS RA0001</a>	Adapter for 1/2" Microphone and 1/4" Preamplifier
GRAS GR0408	Exterior Ear Canal
GRAS GR0409	Union Nut
<a href="#">GRAS AA0018-S</a>	Microdot-BNC Cable, 35 cm
<a href="#">GRAS AA0035</a>	BNC-BNC Cable, 3 m
<a href="#">GRAS 46BD</a>	1/4" CCP Pressure Standard Microphone Set
<a href="#">GRAS AA0070</a>	Microdot-BNC Cable, 3 m
GRAS 45EA	Handset Positioning System



## Power Modules for Pre-polarized Ear Simulators and Microphones

<a href="#">GRAS 12AL</a>	1-Channel CCP Power Module with A-weighting filter
<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)
<a href="#">GRAS RA0157</a>	1/2" Calibration Adapter for KEMAR Pinna

## 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 1/2" microphone Kit for KEMAR
<a href="#">GRAS RA0244</a>	O-ring kit for KEMAR, 2 pcs.
<a href="#">GRAS RA0249</a>	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
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## KEMAR Retrofit Kit for Binaural Hearing Aid Test

[GRAS RA0251](#)

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.

## Extension Cables

GRAS AA0034	BNC-BNC Cable, 2 m
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[GRAS AA0035](#)

BNC-BNC Cable, 3 m
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GRAS AA0036	BNC-BNC Cable, 5 m
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[GRAS AA0037](#)

BNC-BNC Cable, 10 m
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## Flight Case

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

GRAS KB3000	Simulation Model of KEMAR with large pinnae
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GRAS KB3001	Simulation Model of KEMAR with small pinnae
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## Stand for KEMAR

GRAS AL0026	Loudspeaker stand for KEMAR, Ø 35 mm
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## Miscellaneous

GRAS KB0000	KEMAR Handbook
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GRAS KB0010	T-Shirt for KEMAR
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GRAS Sound & Vibration

# 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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