

# GRAS 45BB-14

KEMAR

2 CCP



(0 V/CCP)

2

ANSI: S3.36, S3.25

IEC: 60318-4

ITU-T Rec. P.57 Type 3.3

ITU-T Rec. P.58

45BB-14 KEMAR TEDS

20 kHz LEMO [GRAS 45BB-13 KEMAR](#)

□□

KEMAR Knowles 1972  
[KEMAR.us](http://KEMAR.us) ANSI

S3.36/ASA58-2012 IEC 60318-7:2011

KEMAR KEMAR GRAS

KEMAR  
DUT

45BB KEMAR 45BB KEMAR  
KEMAR 45BB KEMAR  
KEMAR

□□□

**TEDS** □□

CCP KEMAR IEEE 1451.4 TEDS v. 1.0  
(TEDS)

20 kHz 45BB-14 KEMAR

□□

45BB-14 KEMAR  
USB

□□□□

KEMAR

45BB-14 GRAS RA0402  
KB5000/KB5001

KEMAR

RA0402

RA0402 IEC 60318-4 10 kHz 13.5  
kHz 20 kHz IEC  
60318-4 IEC 60318-4 10 kHz 20 kHz  
±2.2 dB THD

IEC 60318-4 ITU-T P.57

GRAS 40AQ 1/2

RA0402

35 Shore 00

KEMAR

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 CCP preamplifier	dB	150
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		60318-4 (former 60711), 60318-7 (former 60959)
ITU-T recommendations		P. 58
Weight	g / oz	11.45 k / 404

2

<a href="#">GRAS 45BB</a>	KEMAR Head & Torso, Non-configured
<a href="#">GRAS KB5000</a>	Large Right Anthropometric Pinna 35 Shore 00
<a href="#">GRAS KB5001</a>	Large Left Anthropometric Pinnar 35 Shore 00
<a href="#">GRAS RA0402</a>	Prepolarized High-Frequency Ear Simulator ( 2 pcs)
GRAS GR1874	Ear Simulator Holder
GRAS GR0408	External Ear Canal
GRAS GR0409	Union Nut
<a href="#">GRAS 26CS</a>	1/4" CCP Short Preamplifier (2 pcs)
<a href="#">GRAS RA0001</a>	Adapter for 1/2" Microphone and 1/4" Preamplifier (2 pcs)
<a href="#">GRAS AA0018-S</a>	Microdot-BNC Cable, 35 cm (2 pcs)
<a href="#">GRAS AA0035</a>	BNC-BNC Cable, 3 m (2 pcs)

2

A row of 15 empty rectangular boxes for writing names.

<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

10 of 10

<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)

10 of 10

<a href="#"><u>GRAS KB5000</u></a>	Large Right Anthropometric Pinna 35 Shore 00
<a href="#"><u>GRAS KB5001</u></a>	Large Left Anthropometric Pinnar 35 Shore 00
<a href="#"><u>GRAS KB0060</u></a>	KEMAR Small Right Straight Pinna 55 Shore 00
<a href="#"><u>GRAS KB0061</u></a>	KEMAR Small Straight Pinna 55 Shore 00
<a href="#"><u>GRAS KB0065</u></a>	KEMAR Large Straight Pinna 55 Shore 00
<a href="#"><u>GRAS KB0066</u></a>	KEMAR Large Left Straight Pinna 55 Shore 00
<a href="#"><u>GRAS KB1060</u></a>	KEMAR Small Right Straight Pinna 35 Shore 00
<a href="#"><u>GRAS KB1061</u></a>	KEMAR Small Left Straight Pinna 35 Shore 00
<a href="#"><u>GRAS KB1065</u></a>	KEMAR Large Right Straight Pinna 35 Shore 00
<a href="#"><u>GRAS KB1066</u></a>	KEMAR Large Left Straight Pinna 35 Shore 00
<a href="#"><u>GRAS KB0090</u></a>	KEMAR Large Right Tapered Pinna (VA-Style/SQ) 55 Shore 00
<a href="#"><u>GRAS KB0091</u></a>	KEMAR Large Left Tapered Pinna (VA-Style/SQ) 55 Shore 00
<a href="#"><u>GRAS KB1090</u></a>	KEMAR Large Right Tapered Pinna (VA-Style) 35 Shore 00
<a href="#"><u>GRAS KB1091</u></a>	KEMAR Large Left Tapered Pinna (VA-Style) 35 Shore 00

## 耳模

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

## 耳道延伸套件 (RA0237-0241)

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

GRAS RA0243	Holder for 1/4" Microphone Kit for KEMAR
GRAS RA0244	O-ring kit for KEMAR
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 亂備件

<a href="#">GRAS RA0251</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.
-----------------------------	--

## 亂備件

GRAS AA0034	BNC-BNC Cable, 2 m
<a href="#">GRAS AA0035</a>	BNC-BNC Cable, 3 m
GRAS AA0036	BNC-BNC Cable, 5 m
GRAS AA0037	BNC-BNC Cable, 10 m

## 亂備件

GRAS KM0094	PELI Case for KEMAR
-------------	---------------------

## KEMAR 亂備件

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

## KEMAR ::

GRAS AL0026	Loudspeaker stand for KEMAR, Ø 35 mm
-------------	--------------------------------------

## ::

GRAS KB0000	KEMAR Handbook
GRAS KB0010	T-Shirt for KEMAR

## GRAS Sound & Vibration

# GRAS Worldwide

Subsidiaries and distributors in more than 40 countries

## HEAD OFFICE, DENMARK

**GRAS SOUND & VIBRATION**  
Skovlytoften 33  
2840 Holte  
Denmark  
Tel: +45 4566 4046  
[www.GRASacoustics.com](http://www.GRASacoustics.com)  
[gras@grasacoustics.com](mailto:gras@grasacoustics.com)

## USA

**GRAS SOUND & VIBRATION**  
9290 SW Nimbus Avenue  
Beaverton, OR 97008  
Tel: 503-627-0832  
Toll Free: 800-231-7350  
[www.GRASacoustics.com](http://www.GRASacoustics.com)  
[sales-usa@grasacoustics.com](mailto:sales-usa@grasacoustics.com)

## UK

**GRAS SOUND & VIBRATION**  
Unit 115, Gibson House,  
Ermine Business Park, Huntingdon,  
Cambridgeshire, PE29 6XU  
Tel: +44 (0) 7762 584 202  
[www.GRASacoustics.com](http://www.GRASacoustics.com)  
[sales-uk@grasacoustics.com](mailto:sales-uk@grasacoustics.com)

## CHINA

**GRAS SOUND & VIBRATION**  
Room 315, RuiBo Center(T1)  
Lane683, Shenhong Rd,  
Minhang District,  
Shanghai, China, 201107  
Tel: +86 21 64203370  
[www.GRASacoustics.cn](http://www.GRASacoustics.cn)  
[cnsales@grasacoustics.com](mailto:cnsales@grasacoustics.com)



## 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)

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

**GRAS**  
An Axiometrix Solutions Brand