

GRAS 45BC-16

KEMAR

2 CCP



CCP

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-16 KEMAR TEDS

45BC-14

LEMO

[GRAS 45BC-15](#)

KEMAR Knowles 1972 (00 35 Shore
[KEMAR.us](#)) ANSI
 S3.36/ASA58-2012 IEC 60318-7:2011 KEMAR

KEMAR KEMAR GRAS
 supra-aural circumaural
 45BC KEMAR 45BC KEMAR
 KEMAR 45BC KEMAR — KEMAR
 KEMAR DUT

TEDS
 CCP KEMAR IEEE 1451.4 TEDS v. 1.0
 TEDS

45BC-16 KEMAR 50 kHz 45BC-16 KEMAR
 USB

45BC-16 GRAS RA0404
 KB5000/KB50001
 KEMAR 2
 KEMAR 5 6
 GRAS ITU-T P51
 1/3 100 dB 20 µPa 100 Hz 16
 kHz

RA0404

RA0404 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 40BD](#) 1/4

RA0404

Set sensitivity @ 250 Hz (± 2 dB)	mV/Pa	1.6
Theoretical dynamic range lower limit with GRAS preamplifier	dB(A)	46
Theoretical dynamic range upper limit with GRAS CCP preamplifier	dB	166
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		Based on 60318-4
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	k Ω	20
Gain	dB	10
Input signal, max.	Vrms	2
Power supply, external	Vdc	24



GRAS 45BC	KEMAR Head & Torso with GRAS mouth simulator, non-configured
GRAS KB5000	KEMAR Large Right Anthropometric Pinna 35 Shore 00
GRAS KB5001	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)
GRAS RA0404	Prepolarized High Resolution Ear Simulator, (2 pcs)
GRAS 26CS	1/4" CCP Standard Preamplifier with Microdot Connector, Very Short (2 pcs)
GRAS RA0001	Right Angled Adapter for 1/2" Microphone and 1/4" Preamplifier (2 pcs)
GRAS AA0018-S	Microdot-BNC Cable, 35 cm (2 pcs)
GRAS AA0035	3 m BNC - BNC Cable (2 pcs)
GRAS 46BD	1/4" CCP Pressure Standard Microphone Set
GRAS AA0070	Microdot-BNC Cable, 3 m



Power Modules for Pre-polarized Ear Simulators and Microphones

GRAS 12AL	1-Channel CCP Power Module with A-weighting filter
GRAS 12AQ	2-Channel Universal Power Module with signal conditioning and PC interface

For Ear Simulator Calibration

GRAS 42AP	Intelligent Pistonphone (250 Hz or 251.2 Hz, 114 dB +/- 0.05 dB)
GRAS 42AA	Pistonphone (250 Hz, 114 dB +/- 0.08 dB)
GRAS 42AG	Multifunction Sound Calibrator, Class 1

Pinna Simulators

GRAS KB5000	Large Right Anthropometric Pinna 35 Shore 00
GRAS KB5001	Large Left Anthropometric Pinnar 35 Shore 00
GRAS KB0060	KEMAR Small Right Ear 55 Shore 00
GRAS KB0061	KEMAR Small Left Ear 55 Shore 00
GRAS KB0065	KEMAR Large Right Ear 55 Shore 00
GRAS KB0066	KEMAR Large Left Ear 55 Shore 00
GRAS KB1060	KEMAR Small Right Ear, 35 Shore 00
GRAS KB1061	KEMAR Small Left Ear 35 Shore 00
GRAS KB1065	KEMAR Large Right Ear 35 Shore 00
GRAS KB1066	KEMAR Large Left Ear 35 Shore 00
GRAS KB0090	KEMAR Large Right Ear (VA-Style/SQ) 55 Shore 00
GRAS KB0091	KEMAR Large Left Ear (VA-Style/SQ) 55 Shore 00
GRAS KB1090	KEMAR Large Right Ear (VA-Style) 35 Shore 00
GRAS KB1091	KEMAR Large Left Ear (VA-Style) 35 Shore 00

Ear Mould Simulators

GRAS KB0110	Ear Mould Simulator for 2 mm inner diameter tubing
GRAS KB0111	Ear Mould Simulator for 3 mm inner diameter tubing

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

GRAS RA0237	Straight Ear Canal Extension Kit for KEMAR
GRAS RA0238	VA-tapered Ear Canal Extension Kit for KEMAR

GRAS RA0239	Ear Canal Extension Kit w. silicone lining for KEMAR
GRAS RA0240	Holder for long 1/2" microphone Kit for KEMAR
GRAS RA0241	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, 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

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
GRAS AA0035	BNC-BNC Cable, 3 m
GRAS AA0036	BNC-BNC Cable, 5 m
GRAS AA0037	BNC-BNC Cable, 10 m

Flight Case

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

Simulation Model of 45BB 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
-------------	--------------------------

Miscellaneous (incl. 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

HEAD OFFICE, DENMARK
GRAS SOUND & VIBRATION
Skovlytoften 33
2840 Holte
Denmark
Tel: +45 4566 4046
www.GRASacoustics.com
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
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
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
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

grasacoustics.com

GRAS
An Axiometrix Solutions Brand