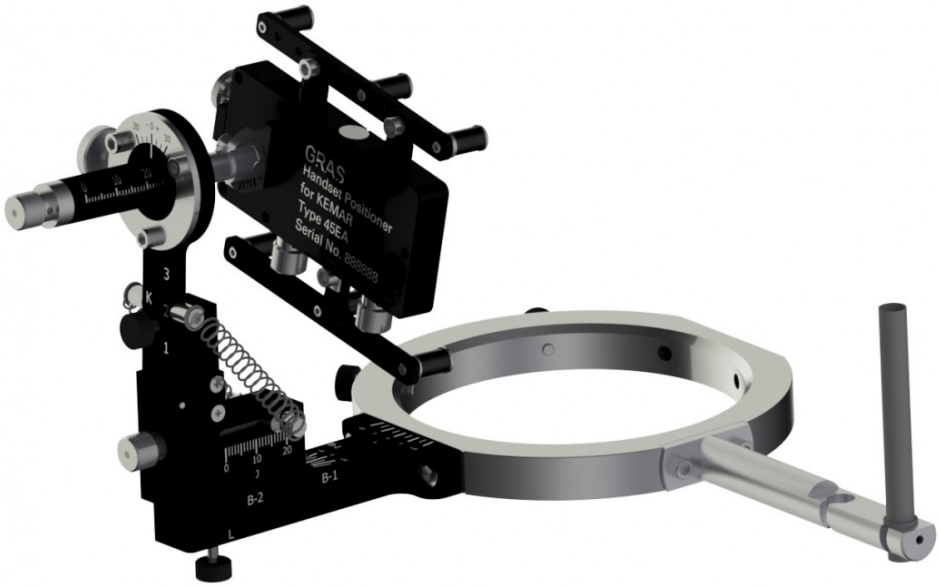
GRAS 45EA

Handset Positioning System for KEMAR



ITU-T rec.: P. 64

The 45EA Handset Positioning System for KEMAR is an easy-to-use telephone measurement tool and advanced alternative to conventional telephone test fixtures. It is designed with maximum flexibility and acoustic performance in mind for laboratories and development environments that care about the acoustic quality of their products.

GRAS Sound & Vibration
Skovlytoften 33, 2840 Holte, Denmark
www.grasacoustics.com

Introduction

GRAS 45EA Handset Positioning System is designed for the head and torso simulator GRAS KEMAR Manikin with Mouth Simulator. With this combination, you can make very realistic in-situ measurements on mobile telephones as well as conventional handsets.

You can mount the system on the KEMAR without additional tools. The system can be mounted on either side of KEMAR, and you can easily switch it from one side to the other side.

The main features are

- Multi-adjustable in three planes (nine moving segments), thus allowing handsets to be exactly positioned according to requirements and standards
- Simulating arm, wrist. palm, and fingers
- Handset fixture featuring a spring arrangement for easily attaching/detaching practically any mobile/cordless handset
- Adjustable force (pinna leakage pressure)
- Graduated scales at all positioning and force adjustments to ensure that any handset position/force adjustment is entirely defined for repeated measurements.
- Options for pinna size and hardness
- Applicable for both right and left ear
- Easy to retrofit
    - Jig for ERP-positioning of handsets

There are two setup modes for the Handset Positioning System.

ERP: This mode uses the Ear Reference Point of the ITU-T P.57 Pinna Simulator, which is determined by the ERP-gauge included with the 45EA, or referred to the EEP (ear entrance point).

<p**Well-defined pressure force:** This mode uses applied handset pressure force against the pinna; this force is measured and set with the force gauge included with the 45EA.

Note: For telephone handset testing based on ITU-T Recommendations, GRAS 45BC must be configured with the GRAS KB1080 ITU-T pinnae and GRAS KB1081.

Typical applications and use

45EA is the logical companion to GRAS 45BB KEMAR and GRAS 45BC KEMAR for reproducible tests of handsets in accordance with the recommendations in ITU-T P.51 Artificial Mouth, ITU-T P.57 Artificial Ears, P.58 Head and Torso Simulator for Telephonometry (HATS) and ITU-T P.64 Determination of Sensitivity/Frequency Characteristics of Local Telephone Systems.

The 45EA is used to simulate how a person holds a handset against the ear with minimum change in the free-field condition and the head-related transfer function (HRTF). This design lets you test all telephone handsets under the same conditions as in real-life situations

- Telephone handset testing
- Telephone handset Research & Development
- Designed for mounting onto GRAS 45BC KEMAR Manikin with Mouth Simulator

It is designed like an arm with a wrist, palm, and fingers.

The arm is mounted on a shoulder and allows for an adjustment of the force with which a handset is pressed against the pinna. Depending on the choice of pinna size, pinna hardness, and research purpose, the sensitivity and leak-tolerance of the receiver can be investigated. There is a pinna-leakage

adjustment for testing the influence of a leak.

The arm has two positions made for various handsets and an additional angle adjustment of the palm. The palm can also be adjusted vertically for orientation at the proper EEP or ERP.

The wrist can adjust the palm angles in two perpendicular directions as well as the position on the pinna.

The palm has three fingers and an end-stop for holding and positioning the telephone handset. Two of the fingers can be adjusted to accommodate for the shape and size of the handset as well as positioning the specified ear cap reference point (ECRP) in the ear reference point (ERP). The third finger is spring-loaded, which makes it easy to mount and remove the handset. The length of the fingers can be adjusted with the extension plates and rods included with the system.

45EA can hold handsets up to either ear on the KEMAR Manikin to mimic a left-handed or right-handed person. This allows for diagnostics of handsets where the receiver and/or microphone is positioned asymmetrically, which changes the send and receive characteristics accordingly.

Compatibility

45EA can be mounted on GRAS 45BB and GRAS 45BC KEMAR and can be used to create accurately reproducible test setups for all types of handsets.

Quality and warranty

The 45EA Handset Positioning System for KEMAR is manufactured in accordance with the well-known GRAS standard, which provides a 2-year warranty against defective materials and workmanship.

ITU-T recommondations		P.64
CE/RoHS compliant/WEEE registered		Yes/Yes/Yes

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

Optional

GRAS 45EB	Ear-Bud Positioning System for KEMAR

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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

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