45CC Headphone Test Fixture

For Fast, Repeatable Production Line Testing

Next Generation Headphone Testing
Keep your measurement test speed on the production line
GRAS has a reputation for providing the best acoustic test equipment available. We know that the better your testing, the better your products.

The 45CC Headphone Test Fixture is the latest in our line of test fixtures for headphone and headset testing. It comes in 12 different configurations with ½” or ¼” microphones and optional ear simulators and mouth simulator. It is based on IEC 61094, 60318-1 and ITU-T Rec P51 and offers adjustable dimensions and precise positioning of the DUT for accurate and highly reproducible measurement results. Perfect for testing all acoustic parameters of headphones and headsets - such as frequency response, distortion and noise - the 45CC is suitable for QC on the production line, but can also be used in R&D tests.

Fast Test Set-up
The 45CC Headphone Test Fixture produces accurate and reproducible test results and can be easily adapted to many different headphone or headset designs and sizes. Distance between ears and head height is adjustable and settings can easily be recreated.

Reliable and Repeatable Tests
You can place the headset in exactly the same position every time using the Positioning Guide. This feature is compatible with most headsets.

Easy Calibration
It can be time consuming to calibrate the microphone, but with the snap fittings you can remove and reinstall the GRAS microphone quickly without using tools.

Multiple Configurations with Microphones, Ear Simulators and Mouth Simulator
For your convenience, we have made 45CC available in a number of pre-configurations to suit specific testing needs.
45CC
Headphone Test Fixture

Configurations without Mouth Simulator

45CC-1 Externally Polarized 1/2" Microphones
45CC-2 Prepolarized 1/2" Microphones
45CC-3 Externally Polarized Microphones and 60318-1 Ear Simulator
45CC-4 Prepolarized Microphones and 60318-1 Ear Simulator
45CC-9 Externally Polarized 1/4" Microphones
45CC-10 Prepolarized 1/4" Microphones

IEC 61094-4 1/2" WS2P Microphones in the Ear Plate Plane

- Frequency response: 3.15 Hz - 20 kHz
- 40AG dynamic range: 25 dB(A) - 164 dB
- 40AO dynamic range: 25 dB(A) - 150 dB

IEC 61094-4 1/4" WS3P Microphones in the Ear Plate Plane

- Frequency response: 4 Hz - 70 kHz
- 40BP dynamic range: 39 dB(A) - 169 dB
- 40BD dynamic range: 44 dB(A) - 166 dB

Technical Specifications

- Width between ears adjustable from 130 to 170 mm
- Height of headband holder adjustable from 75 to 125 mm
- Horizontal position of headband holder adjustable, ± 5 mm
- Ear plate angle: 4.5° (ISO 4869-3)
- Diameter of ear plate: 128 mm
- Weight (without microphones or mouth simulator): 3 kg
- Positioning guide: For horizontal and vertical adjustments

Configurations with Mouth Simulator

45CC-5 Externally Polarized 1/2" Microphones
45CC-6 Prepolarized 1/2" Microphones
45CC-7 Externally Polarized Microphones and 60318-1 Ear Simulator
45CC-8 Prepolarized Microphones and 60318-1 Ear Simulator
45CC-11 Externally Polarized 1/4" Microphones
45CC-12 Prepolarized 1/4" Microphones

Ear Simulator in the Ear Plate Plane

RA0039

IEC 60318-1

44AA Mouth Simulator Placed in Accordance with ITU-T Rec P58

- Standards: IEEE 269, 661 and ITU-T Rec P51
- Continuous output level: 110 dB (200 Hz - 6 kHz);
  100 dB (100 Hz - 16 kHz)
- Loudspeaker: 8Ω / 20 W (max. continuous)
- Gain: 10 dB
- Power supply: 24 VDC
- Weight: 1.3 kg