

RACS

RION Acoustic Calibration System

COMPLETE SUPPORT

From consultation to operation support
Please leave it all to us

RACS

RION Acoustic Calibration System

Through RACS, RION provides a complete calibration solution for sound level meter, personal sound exposure meter, microphone and sound calibrator which complies to the ISO/IEC 17025:2017.

Target instruments : Sound level meter, Personal sound exposure meter, Microphone, Sound Calibrator

Applications

- Acoustical calibration of sound level meters and periodic tests (IEC 61672-3) using comparison coupler (IEC 61094-5) or anechoic chamber (IEC 61094-8*¹)
- Acoustical calibration of personal sound exposure meters and periodic tests*² (IEC 61252) using comparison coupler (IEC 61094-5) or anechoic chamber (IEC 61094-8*¹)
- Electrical calibration of sound level meters and periodic tests (IEC 61672-3) using dummy microphone
- Electrical calibration of personal sound exposure meters and periodic tests (IEC 61252) using dummy microphone*²
- Calibration of measurement microphones*³ using comparison coupler (IEC 61094-5) or anechoic chamber (IEC 61094-8*¹)
- Calibration of sound calibrators and periodic tests (IEC 60942)

Acoustical test method	Sound level meter	Personal sound exposure meter	Microphone	Sound calibrator
Free-field comparison method using anechoic chamber (IEC 61094-8)	✓	✓	✓	—
Pressure comparison method using comparison coupler (IEC 61094-5)	✓	✓	✓	—
Microphone method (IEC 60942)	—	—	—	✓

Features

Flexibility

Supports both comparison coupler method and anechoic chamber method

Simplicity

Automatic test for RION sound level meters/semi-automatic test for other brand sound level meters and personal sound exposure meters

Immediate results

Automatic test requires only 45 min for RION sound level meters.

- Supports sound level meters, measurement microphones and personal sound exposure meters.
- Supports sound calibrators.
- Calibration of measurement microphones open-circuit sensitivity
- Consists of independent function modules and there is no black box. The combination can be properly selected depending on measurement requirement. User can estimate the uncertainty of measurement for each modules.
- Required test parameters for calibration on RION products are pre-installed.
- Data export, automatic creation of calibration certificate and printing

*1 Excluding anechoic chamber performance *2 Option *3 IEC 61094-4 standardized and non-standard



Calibration of Sound calibrator



Complete support offered by RION

Consultation

Provide for optimum free-field of sound

Training

Operation support

RION is not only an equipment provider but also a strong partner for clients who wish to implement acoustic calibration service.

RION supports from consultation to operation support.

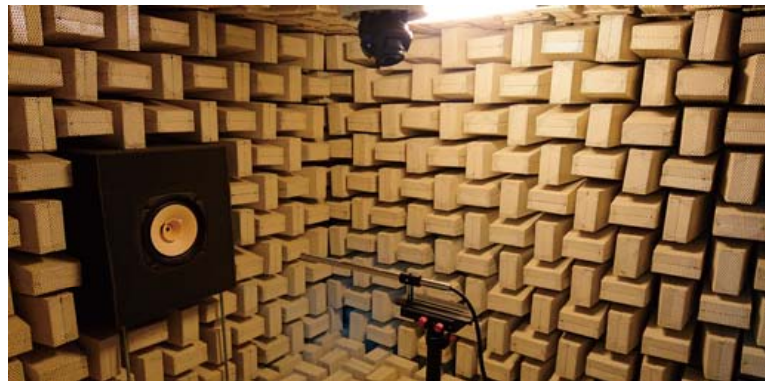
Consultation

- Proposing optimum calibration system fully conforming to IEC standards
- Proposing efficient calibration method for each laboratory



Provide for optimum free-field of sound

- Designing /Installing new anechoic chamber in accordance with the IEC 61094-8
- Proposing plans for improvement of existing facility



Training

- Installation of RACS
- Operation training
- Technical lecture with detailed test procedures related to the IEC standards
- Providing completed documents (Operation Manual, test procedure and technical information)

Operation support

- Establishing operation flow for ISO/IEC 17025 accreditation
- Uncertainty evaluation support
- Technical support by IEC standard expert



Test report

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Certificate No. AL990001E

CERTIFICATE OF CALIBRATION

Customer name: **** CO., LTD.
 Customer address: *****
 Product name: Sound level meter
 Calibration item:

Product name	Model	class	Serial number	Manufacturer
Sound level meter	NL-42	class 2	XXXXXXXX	RION CO., LTD.
Microphone	UC-52	----	XXXXXX	RION CO., LTD.
Preamplifier	NH-24	----	XXXXX	RION CO., LTD.

Software Version: *****

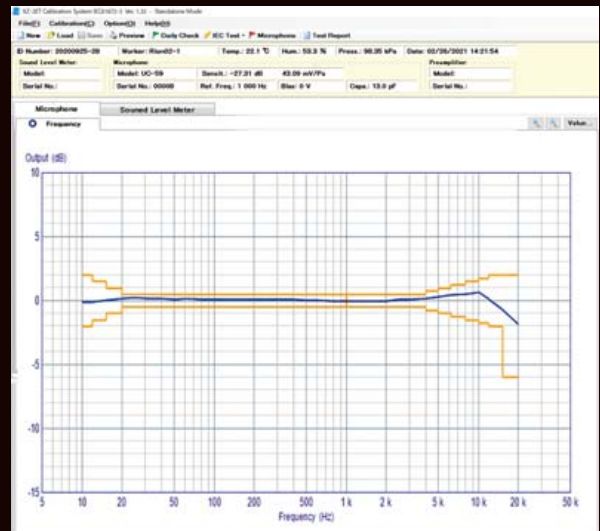
Calibration method: Calibration conforming to IEC 61672-3:2013
 Calibration item: As shown on the following pages
 Calibration location: RION SERVICE CENTER CO., LTD., Calibration room
 2-22-2, Hyoue, Hachioji-shi, Tokyo 192-0918, Japan
 Calibration date: **/**/**** (DD/MM/YYYY)

We hereby certify that the results of this calibration were as follows.

Issue date: **/**/**** (DD/MM/YYYY)

OOOOOO, Head of Office
 Quality Control Office
 Engineering Business Unit
 RION SERVICE CENTER CO., LTD.
 2-22-2, Hyoue, Hachioji-shi, Tokyo 192-0918, Japan

Chart



Frequency response of microphone



Frequency response of sound level meter

Acoustical Calibration System

