CE

RION

A standard sound source that generates a constant sound pressure of 114 dB at 250 Hz

PISTONPHONE
NC-72B

- Conforms to IEC 60942 : 2017 class LS/M and class 1/M
- Supports exact frequencies (251.19 Hz)*

  *Exact frequencies have been adopted due to revisions to certification and inspection regulations of the Measurement Act of 2015.
- Allows calibration with precision of ±0.10 dB
- Can also be powered by NiMH batteries
- Usable as a standard sound source in laboratories or as a calibration sound source for sound level meters on site.

How to Use

Carefully insert a microphone all the way into the coupler. Then simply turn the power on to apply a constant sound pressure level to the diaphragm of the microphone. To use a 1/2-inch or 1/4-inch microphone, install the supplied adapter into the coupler. Turn the power switch on and ensure that the battery voltage monitor (LED) is lit during use.

Usage Example

Storage Case (Included)

Relationship with Atmospheric Pressure

The NC-72B is designed to generate sound that has a sound pressure level of 114 dB (nominal) at an atmospheric pressure of 101.325 kPa. Because compensation may be necessary depending on the barometric pressure, a barometer is included.

Operating Principle

Two pistons are driven symmetrically through a cam that is directly connected to the shaft of a precise motor (Fig. 1 and 2). The shape of the cam is uniquely designed to enable the pistons to operate with accurate sinusoidal motion. A special low-friction resin was used for the pistons to maintain their initial performance for about 2 000 hours without using any grease.

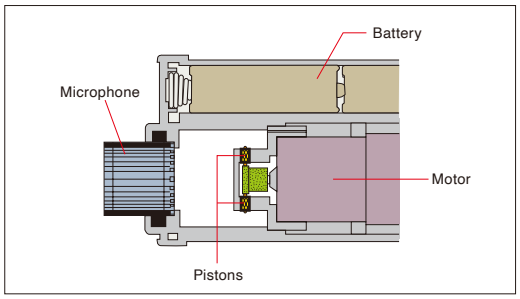

Fig. 1 (Component drawing, side view)

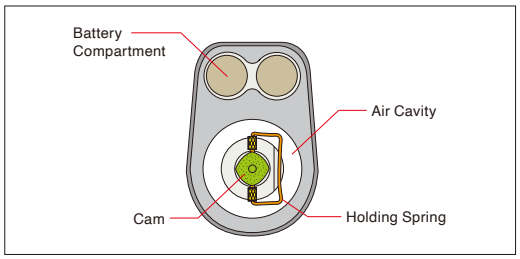

Fig. 2 (Component drawing, front view)

Specifications(at reference environmental conditions*)

Applicable standards		IEC 60942:2017 class LS/M, class 1/M ANSI/ASA S1.40-2006 (R2016) class LS/C, class 1/C JIS C 1515:2020 class LS/M, class 1/M CE marking, WEEE Directive, Chinese RoHS
Specified microphones		Microphones made by RION as well as microphones made by other manufacturers that meet the IEC 61094-1, IEC 61094-4 size specifications 1-inch microphones 1/2-inch microphones (supplied adapter used) 1/4-inch microphones (supplied adapter used)
Sound pressure level	Nominal sound pressure level	114 dB
	Specified sound pressure level	114.0 dB ±0.2 dB (As noted on supplied calibration chart)
	Specified sound pressure level tolerance	±0.10 dB (Using specified sound pressure level on supplied calibration chart as reference)
Frequency	Nominal frequency	250 Hz
	Specified frequency	251.19 Hz ±0.10 Hz (As noted on supplied calibration chart)
	Specified frequency tolerance	±0.1 % (Using specified frequency on supplied calibration chart as reference)
THD + noise rating of generated sound		2.0 % max. (22.4 Hz to 22.4 kHz)
Ambient conditions for operation	Static pressure	65 kPa to 108 kPa
	Ambient temperature	–10°C to +55°C
	Relative humidity	10 % to 90 % RH (no condensation)
Power supply		Six AA batteries Alkaline batteries LR6, Manganese batteries R6P, NiMH rechargeable batteries HR6 (Set the battery switch to the type of battery used)
Battery life		15 hours or more (when in continuous use with six LR6 batteries) 4 hours or more (when in continuous use with six R6P batteries) 13 hours or more (when in continuous use with six HR6 batteries)
Dimensions and weight		Approx. 62 mm (H) × 44 mm (W) × 170 mm (D), Approx. 750 g (including batteries)
Supplied accessories		Carrying case ×1 1/2-inch adapter ×1 1/4-inch adapter ×1 Barometer ×1 Alkaline batteries (LR6) ×6 Calibration chart ×1

*Standard environmental conditions: static pressure of 101.325 kPa, ambient temperature 23°C, relative humidity 50 %

RION CO., LTD. is recognized by the JCSS which uses ISO/IEC 17025 as an accreditation standard and bases its accreditation scheme on ISO/IEC 17011. JCSS is operated by the accreditation body (IA Japan) which is a signatory to the Asia Pacific Accreditation Cooperation (APAC) as well as the International Laboratory Accreditation Cooperation (ILAC). The Quality Assurance Section of RION CO., LTD. is an international MRA compliant JCSS operator with the accreditation number JCSS 0197.

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Distributed by:
SIGMATEST Messtechnik
Nienhof 6
D-24809 N¿bbel
Phone +49.7731.977001
Fax +49.7731.977003
info@sigmatest.net
www.sigmatest.net

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RION CO., LTD.
https://rion-sv.com/

3-20-41, Higashimotomachi, Kokubunji, Tokyo 185-8533, Japan
Tel: +81-42-359-7888 Fax: +81-42-359-7442