



CERTIFICATE OF CALIBRATION



0653

Date of Issue: 16 July 2025

Calibrated at & Certificate issued by:
ANV Measurement Systems

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Acoustics Noise and Vibration Ltd trading as ANV Measurement Systems

Certificate Number: UCRT25/2048

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Approved Signatory

CUSTOMER
RBA Acoustics Ltd
44 Borough Road
London
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ORDER No REDNOR2025 **Job No** UKAS25/07533

DATE OF RECEIPT 10 July 2025

PROCEDURE Calibration Engineer's Handbook, section 25: periodic testing of sound level meters to IEC 61672-3:2006 (BS EN 61672-3:2006) as modified by UKAS TPS 49

IDENTIFICATION Sound level meter Norsonic type 140 serial No 1405945 connected via a preamplifier type 1209 serial No 15314 to a half-inch microphone type 1225 serial No 208218. Associated calibrator Norsonic type 1251 serial No 34057 with a one-inch housing and adapter type 1443 for half-inch microphone.

CALIBRATED ON 16 July 2025

PREVIOUS CALIBRATION Calibrated on 14 June 2023, Certificate No. U44502 issued by a UKAS accredited calibration laboratory No. 0789

This certificate is issued in accordance with the laboratory accreditation requirements of the United Kingdom Accreditation Service. It provides traceability of measurement to the SI system of units and/or to units of measurement realised at the National Physical Laboratory or other recognised national metrology institutes. This certificate may not be reproduced other than in full, except with the prior written approval of the issuing laboratory.

CERTIFICATE OF CALIBRATION

UKAS ACCREDITED CALIBRATION LABORATORY No 0653

Certificate No UCRT25/2048

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The sound level meter was set up using the type 1251 sound calibrator supplied; it was set to frequency weighting A, and initially read 113.9 dB. It was then adjusted to read 113.7 dB (corresponding to 113.7 dB at standard atmospheric pressure). This reading was derived from Calibration Certificate no. UCRT25/2030 supplied by this laboratory and manufacturers' information on the free-field response of the sound level meter. The calibration check frequency was 1kHz. The final microphone sensitivity calculated and stored by the meter was -25.5 dB.

Procedures from IEC 61672-3:2006 (BS EN 61672-3:2006) as modified by UKAS TPS 49 were used to perform the periodic tests.

RESULTS

The sound level meter submitted for testing has successfully completed the class 1 periodic tests of IEC 61672-3:2006 (BS EN 61672-3:2006), for the environmental conditions under which the tests were performed. As public evidence was available, from an independent testing organization responsible for approving the results of pattern evaluation tests performed in accordance with IEC 61672-2 : 2003 (BS EN 61672-2 : 2003), to demonstrate that the model of sound level meter fully conformed to the requirements in IEC 61672-1 : 2002 (BS EN 61672-1 : 2003), the sound level meter submitted for testing conforms to the class 1 requirements of IEC 61672-1 : 2002 (BS EN 61672-1 2003).

The self-generated noise recorded with the microphone replaced by the electrical input device was:

12.1 dB (A) 13.2 dB (C) 21.5 dB (Z, normal) 47.5 dB (Z, wide)

No expected maximum noise level has been published for Z (wide) weighting.

The environmental conditions recorded at the start and end of testing were:

Start: 22 to 24 °C, 50 to 60 %RH and 100.5 to 100.6 kPa

End: 23 to 24 °C, 50 to 60 %RH and 100.5 to 100.6 kPa

Technical information including adjustment data specified in the manufacturers' User Guide dated February 2017 and additional manufacturer's information has been used to carry out this verification. No information on the uncertainty of measurement, required by 11.7 of IEC 61672-3:2006 (BS EN 61672-3:2006), of the adjustment data given in the instruction manual was made available by the manufacturer. The uncertainty of measurement of the adjustment data has therefore been assumed to be numerically zero for the purpose of this periodic test. If these uncertainties are not actually zero, there is a possibility that the frequency response of the sound level meter may not conform to the requirements of IEC 61672-1:2002 (BS EN 61672-1:2003).

Publicly-available evidence has been found that the Norsonic 140 sound level meter design has successfully undergone pattern evaluation in accordance with IEC 61672-2:2002 (BS EN 61672-2:2003) by Physikalisch-Technische Bundesanstalt (PTB), an independent testing organisation responsible for pattern approvals.

All measurement data are held at ANV Measurement Systems for a period of at least six years.

The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor $k=2$, providing a coverage probability of approximately 95%. The uncertainty evaluation has been carried out in accordance with UKAS requirements.

NOTES

Any opinions or interpretations which may be expressed in the following notes are not UKAS Accredited.

- 1 The instrument was running firmware version 3.0.1866
- 2 It should be noted that the meter is not equipped with an under-range indicator, and care should therefore be taken to restrict measurements to the linearity ranges specified in the User Guide.
- 3 The correction filters were set as follows during testing:

	Random	Windscreen	Preamp	Self-noise
Status	OFF	OFF	ON	N/A
Screen marker			G	

- 4 Typical case reflection factors specified by the manufacturer have been used for this verification.
- 5 No suitable microphone frequency response information was supplied with the instrument. It was therefore measured by this laboratory using the electrostatic actuator method. This response in isolation is not UKAS accredited.

The results on this certificate only relate to the items calibrated as identified above.

END