HD2022
ACOUSTIC CALIBRATOR

The HD2022 sound level calibrator is a portable, battery operated sound source, suitable for sound level meters (portable and laboratory) and acoustic stations.

It allows calibrating ½" and ¼" microphones with mechanical dimensions compliant with IEC 61094-1 ("Measurement microphones. Part 1: Specifications for laboratory standard microphones") and IEC 61094-4 ("Measurement microphones. Part 4: Specifications for working standard microphones").

The generated sound pressure level is equal to 114 dB at 1000 Hz frequency.

A LED signals the low battery condition.

Calibration

The HD2022 can be calibrated by a Delta Ohm authorized dealer or laboratories accredited for calibration of sound level generators. Calibrating the instrument means checking that frequency, sound level and signal distortion fall within the limits of tolerance set by the reference standard (IEC 60942:2003). The current noise legislation estabilishes the maximum interval between calibrations.

The HD2022 calibrator is a precision instrument, designed to maintain over time the sound level set in the factory. However, we suggest that you set up the calibrator at least every two years and whenever calibration values are close or above the tolerance values listed in technical specfications. The calibration can be carried out by a Delta Ohm authorized dealer only.

Advantages of the HD2022 calibrator

- The 1000 Hz frequency allows calibrating sound level meters with any frequency weighting (LIN, A, B, ...), without applying any correction factor.
- The generated sound pressure level is indipendent of atmospheric pressure: you don't need to adjust the value according to static pressure over a wide range of values.
- The calibrator can be conveniently used both in laboratory and in the field. The 114 dB sound level allows performing calibrations even in high background noise environments.
- Its simplicity of use allows even unskilled staff to use it.

TECHNICAL SPECIFICATIONS

The HD2022 calibrator complies with **IEC 60942-2003 Class 2 and ANSI S1.40-1984**.

Coupling cavity	For standard ½" (12.7 ± 0.03 mm) microphones according to IEC 61094-1 and IEC 61094-4
Optional adapter	HD2020MA for ¼" microphones
Frequency	1000 Hz
Frequency tolerance	2% in the range 0…+40 °C and 10…90%RH
Sound pressure level	114.0 dB ± 0.3 dB at 1 kHz (referred to 101.3 kPa, 23 °C ± 3 °C and 65%RH)
Reference conditions	23 °C, 50%RH, 101.3 kPa, microphone capsule with 10 mm^3 equivalent volume
Stabilization time	10 s
Total distortion	< 1%
Ambient condition influence **Temperature and humidity influence** **Static pressure influence**	 < 0.3 dB in the range 0…40 °C and 10…90%RH < 0.1 dB in the range 65…108 kPa
Stability levels **Short-term stability** **Stability after 1 year with normal use**	 ±0.05 dB ±0.15 dB
Operating conditions	0…+40 °C / ≤ 90%RH
Storage temperature	-25…+70 °C
Microphone equivalent volume	From 5 to 250 mm^3
Power supply	9 V alkaline battery IEC type 6LR61 9 V rechargeable batteries can also be used
Battery autonomy	48 hours of continuous use with good quality alkaline batteries
Case material	ABS
Dimensions	53 x 43 x 83 mm
Weight	160 g
Protection degree	IP 64
Effects of electromagnetic fields	< 0.3 dB

ORDERING CODES

HD2022 Acoustic calibrator. Supplied with: 9 V alkaline battery and instruction manual.

HD2020MA Microphone adapter for ¼" capsules.

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