

# 1987 Minical Sound-Level Calibrator

- Produces 1000 Hz at levels of 94 or 114 dB
- Compatible with all common measurement microphones

The 1987 Minical Sound-Level Calibrator is designed to allow quick, accurate field checks of acoustic instrument sensitivity. It produces a single-frequency output of 1000 Hz at sound-pressure levels of either 94 or 114 dB; it features a high-impact-resistant case and a special package design that makes it resistant to moisture, dust and mechanical shock. The 1987 Minical incorporates the same design features for accuracy and stability as those noted for the 1986 Omnical. It also couples to the same variety of microphone sizes as those listed for the 1986.

The 1987 is ideal for quick, daily calibration checks of sound-level meters and other acoustic instruments where sensitivity should be ascertained before and after measurements.

## SPECIFICATIONS

**Output Sound-Pressure Levels:** 114 dB or 94 dB re 20  $\mu$ Pa<sup>†</sup> under reference conditions.

**Output Frequency:** 1000 Hz  $\pm$  3%.

**Reference Conditions:** TEMPERATURE: 20° C (68° F). ATMOSPHERIC PRESSURE: 1013 mbar<sup>†</sup> (760 mm of Hg) (30 in. of Hg). RELATIVE HUMIDITY: 65%. MICROPHONE EFFECTIVE VOLUME: 0.5 cm<sup>3</sup> (0.03 in.<sup>3</sup>) (nominal for GR 1961 Electret-Condenser Microphone\*).

**Accuracy of Sound-Pressure Level:** Under stated reference environmental conditions,  $\pm$  0.25 dB for cavity alone, or cavity when used with any adaptor (except 1 1/8-in. adaptor:  $\pm$  0.5 dB).

**Temperature Coefficient of Sound-Pressure Level:** Less than  $\pm$  0.02 dB/° C ( $\pm$  0.01 dB/° F).

**Battery Test:** Internal circuitry checks condition of battery continuously. Calibrator will not operate at all if battery voltage falls below acceptable range.

**Microphone Coupling:** Transducer cavity accommodates following 1-in. microphones: GR 1961 electret-condenser,\* GR 1971 ceramic, Western Electric 640AA and Tokyo Riko MR103.

**Environment:** TEMPERATURE: -10 to + 50° C (+ 14 to + 122° F), operating; -40 to + 70° C (-40 to + 140° F), storage with battery removed. HUMIDITY: 0 to 90% RH, operating.

**Accessories Supplied:** Coupler-adaptor to accommodate GR 1962 1/2-in. electret-condenser microphone\* and GR 1983 Sound-Level Meter microphone; carrying pouch; 3 spare desiccant kits; battery; instruction manual.

**Accessories Available:** Adaptor set that includes coupler-adaptor for 3/8-in. GR 1954 Noise Dosimeter microphone; coupler-adaptors and "O" ring for 1-in., 1/2-in. and 1/4-in. B & K microphones, and coupler-adaptor for 1 1/8-in. Shure Brothers microphone.



**Power:** Powered by 9-V alkaline battery, Mallory MN 1604 or Eveready 522 recommended. Battery provides at least 20-h continuous operation.

**Mechanical:** DIMENSIONS (wxhxd): Approximately 63x63x89 mm (2 1/2x2 1/2x3 1/2 in.). WEIGHT: Approximately 270 gm (9.5 oz).

<sup>†</sup>In the international system of units (SI), the unit of pressure is the pascal (Pa); 1 Pa = 1 N/m<sup>2</sup> = 10 dynes/cm<sup>2</sup> = 10<sup>-2</sup> mbar. REF: "The International System of Units (SI)," U.S. Dept. of Commerce, National Bureau of Standards, NBS Special Publication 330. SD Cat. No. C 13. 10:330/2, U.S. GPO Wash., D.C., 20402.

\*U.S. Patent 4,070,741

Description	Catalog Number
1987 Minical Sound-Level Calibrator	1987-9700
Calibrator Adaptor Set, adapts 1987 to: 3/8-in. microphone on GR 1954 Noise Dosimeter, B & K 1-, 1/2-, 1/4-in., and Shure Brothers 1 1/8-in. microphones.	1987-9600
Battery, spare (1 required)	8410-3400

National stock numbers are listed before the Index.



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