



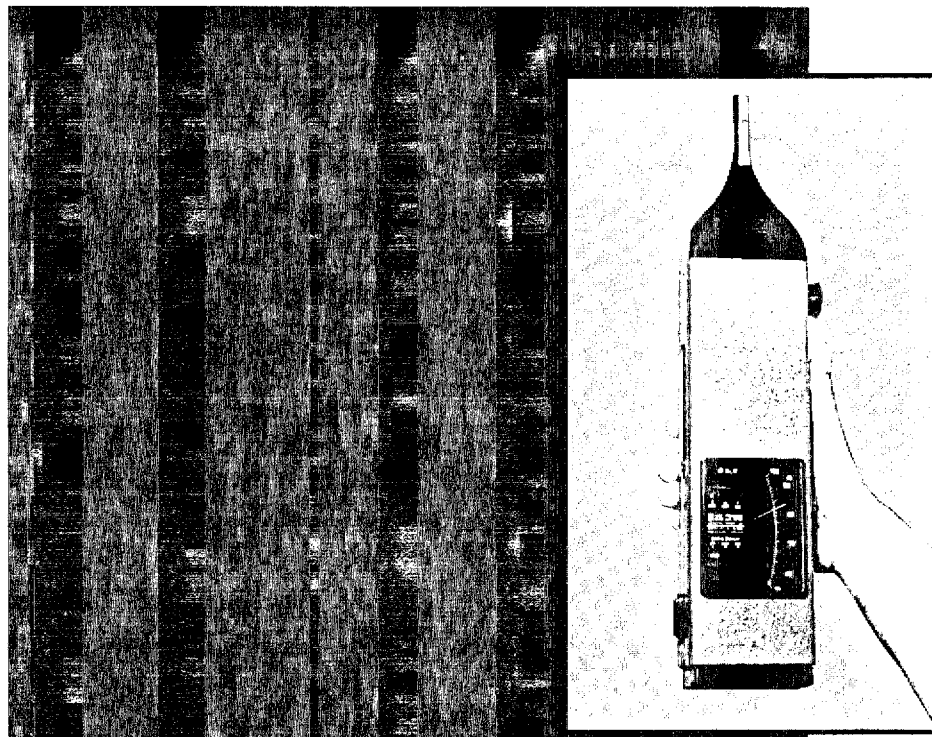
# Advanced Test Equipment Rentals

www.atecorp.com 800-404-ATEC (2832)

## 1982 PRECISION SOUND-LEVEL METER & ANALYZER

### Meets Your Requirements for Quality Sound Measurements

- Versatile, all-purpose instrument for the widest range of noise measurements: precision sound-level meter, peak and impulse noise meter, and octave-band analyzer
- Ideal for OSHA measurements
- Digital and analog displays for error-free readings
- Lightweight (3 pounds) and compact for easy handling and use



Versatility and ease-of-use. That's what GenRad designed into the 1982.

Now you can use a single instrument, without plug-in filters or costly accessories, to make A, B, or C weighted sound-level measurements from 30 dB to 140 dB...octave-band analyses in 10 bands from 31.5 Hz to 16 KHz...and peak or impulse noise measurements.

The 1982 conforms to ANSI Type 1 and IEC sound-level meter standard 651.

In addition, it uses a single attenuator, allowing you to set the range desired, switch on the instrument, and read the measured level from either the digital or analog display. This eliminates the confusion of a two-attenuator system.

### Easy, Accurate Readings

Meter readings can be easily viewed during operation on the digital LED display (resolution of 0.1 dB), or the 1982's analog meter.

The 1982's peak detector is fast, for measuring impact- or impulse-type noise. With a 50 microsecond

rise time, the detector ensures reading the true peak of the signal up to 140 dB. (An accessory microphone attenuator extends this range to 150 dB.) An impulse detector which meets IEC 651 is also built in.

A significant feature of the 1982 lets you capture and hold the peak or rms reading on the digital display without inhibiting successive readings on the analog meter. This lets you take ambient level readings immediately after the impact occurs—without losing the peak reading.

Also, in this mode you don't have to wait for the peak detector to decay before reading a lower peak—a press of the capture button resets the long decay time of the detector, allowing you to read a lower peak immediately following the previous measurement.

The 1982 weighs a mere 3 pounds. For noise measurements where a remote microphone location is required, GenRad provides accessories including a calibrator, carrying case, tripod, extension cable, battery pack assembly, and dummy microphones.

## SPECIFICATIONS

**STANDARDS:** Meets the following (use 1986 or 1987 Sound-Level Calibrator):

ANSI Standard Specifications for Sound-Level Meters S1.4-1971, Type 1 (Precision).

IEC Sound Level Meter Standard 651, Type 1.

ANSI Standard Specifications for Octave, Half-Octave, and Third-Octave Band Filter Sets S1.11-1966, Type O, Class II.

IEC Recommendation Publication 225-1966, Octave, Half-Octave, and Third-Octave Band Filters for the Analysis of Sound and Vibrations.

**LEVEL RANGE:** 30-130 dB re 20  $\mu$ Pa rms (140-dB PEAK). May be extended to 140-dB rms (150-dB PEAK) using 10-dB microphone attenuator (1962-3200) supplied. Typical minimum measurable level, 34 dBA; lower in octave bands. Noise floor at least 5 dB below minimum measurable levels.

**FREQUENCY RESPONSE:** A, B, and C weighting; 10 octave-band filters ranging in center frequency from 31.5 Hz to 16 KHz; a FLAT response (+ 0.5, -3 dB from 10 Hz to 20KHz).



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...rms detection for signals with crest factors as high as 20 dB to 120dB\*\* (10 dB at 130 dB). OVERLOAD: Signal peaks monitored at two critical points to provide positive panel lamp warning of overload.

**DISPLAY:** ANALOG: Meter with 3-in. scale marked in 1-dB increments, four ranges; 30-80 dB, 50-100 dB, 70-120 dB, 90-140 dB. DIGITAL: 4-digit LED display with 0.1-dB resolution. Direct reading on all ranges. DIGITAL DISPLAY MODES: OFF, for minimum battery drain; CONTINUOUS, like meter except present reading can be "captured" by pushbutton; MAXIMUM, automatically holds highest level in measurement interval, until reset by pushbutton.

**MICROPHONE:** TYPE: 1/2-in. Electret-Condenser Microphone with flat random (-9700) or perpendicular (-9710) incidence response. MOUNTING: Mounted with detachable preamplifier (1981-4000) that plugs into nose of instrument, or may be removed with 10-foot cable (1933-0220) supplied or 60-foot cable (1933-9601) available. INPUT IMPEDANCE: Approximately 2 GΩ/ < 3 pF.

**OUTPUTS:** AC OUTPUT: 0.4 V rms nominal behind 5kΩ corresponding to full-scale deflection, any load permissible. DC OUTPUT: 3V behind 30kΩ corresponding to full-scale meter deflection. Output is linear in dB at 60 mv/dB over 70-dB range (50-dB display range plus 20-dB crest-factor allowance). Any load permissible.

**CALIBRATION:** FACTORY: Fully tested and calibrated to all specifications; acoustical response and sensitivity are measured in a free field by comparison with a

Sound-Level Calibrators are available for making an overall pressure calibration.

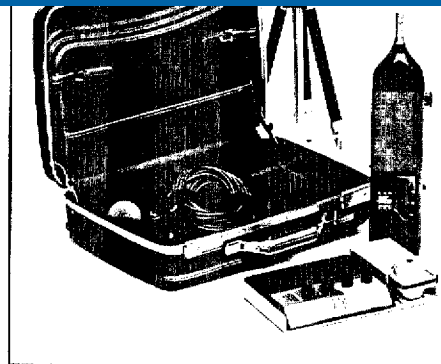
**ENVIRONMENT:** TEMPERATURE: -10 to +50° C operating, -40 to +60° C storage with batteries removed, 15 to 50° C during battery charging. HUMIDITY: 0-90% RH operating.

**SUPPLIED:** Battery pack assembly; battery charger; microphone extension cable (10-foot); 10-dB microphone attenuator; calibration screwdriver; wrist strap; miniature phone plug(2); instruction manual; microphone windscreen.

**AVAILABLE:** Carrying Case (includes space for calibrator, cable, tripod, misc. access.); battery pack assembly; microphone extension cables (10- and 60-foot); calibrators, 1986 and 1987; dummy microphones, 22 and 35 pF with BNC female input; tripod - will mount either 1982 or preamplifier; windscreen (package of 4); adaptor cables for connection to outputs, all 3 feet (0.9 mm) long; 1560-9619 Audiometer Calibration Accessory Kit.

**POWER:** Removable battery pack containing 3 AA-size nickel-cadmium rechargeable cells with charger interlock. Battery life between charges 3 to 4.5 hours depending on digital display usage. Battery charger supplied operates on 115/220 volts AC 50-60 Hz; full recharge accomplished in about 4 hours. Three AA-size alkaline cells (not rechargeable) may be used in place of the battery pack.

**MECHANICAL:** DIMENSIONS: (wxhxd): 3.9x16.8x2.3 in. (99x425x59mm). WEIGHT: 3 lb. (1.36 kg) net; 6 lb. (2.8 kg) shipping.



Description	Order No.
1982 Precision Sound-Level Meter and Analyzer (supplied with 1/2-in. flat random-incidence response electret condenser microphone)*	1982-9700
1982 Precision Sound-Level Meter and Analyzer (supplied with 1/2-in. flat perpendicular-incidence response electret condenser microphone)**	1982-9710
Sound-Analysis System - 1982 Precision Sound-Level Meter and Analyzer (with 1/2-in. flat random-incidence response microphone). This system includes accessories supplied as noted in Specifications, plus: 1562-A Calibrator, 1560-9590 Tripod, 1982-9630 Carrying Case, and 1933-9601 60-foot Cable	1982-9720
Sound-Analysis System - 1982 Precision Sound-Level Meter and Analyzer (with 1/2-in. flat perpendicular-incidence response microphone). This system includes all of the accessories of the above described system. Note: the difference between these systems is in the microphones supplied.	1982-9730
Accessories	Order No.
1986 Omnical Sound-Level Calibrator	1986-9700
1987 Minical Sound-Level Calibrator	1987-9700
1560-9619 Audiometer Calibration Accessory Kit	1560-9619
Microphone Extension Cable (10 ft)	1933-9600
Microphone Extension Cable (60 ft)	1933-9601
1933 Vibration Integration System	1933-9610
Dummy Microphone	1962-9620
Rechargeable Battery Pack	1981-2050
Carrying Case (for 1982, calibrator, tripod)	1982-9630
Tripod	1560-9590
Windscreen (package of 4)	1560-9522
*Conforms to ANSI S1.4 Type 1 and IEC 651 **Conforms to IEC 651	

\*U.S. PATENT NO. 3,681,618

\*\*10 dB HIGHER WHEN 10-dB MICROPHONE ATTENUATOR IS USED.