

KEYSIGHT TECHNOLOGIES (AGILENT HP)

8903B

The Keysight / Agilent (originally Hewlett-Packard) 8903B is an industry-standard audio analyzer that operates from 20 Hz to 100 kHz. It integrates a low-distortion programmable audio source with a high-performance distortion analyzer, frequency counter, AC voltmeter, DC voltmeter, and SINAD meter in a single unit. Under microprocessor control, the 8903B performs complex stimulus-response measurements automatically, tuning and autoranging for optimal accuracy. With standard internal low-pass filters, dual slots for optional plug-in weighting networks, and true-rms, average, and quasi-peak detection, it remains a highly versatile workhorse for transceiver testing and precision audio analysis.

SPECIFICATIONS

General

Interfaces	HP-IB (IEEE 488)
Display	Dual LED
Sweep Modes	Linear and Logarithmic

Physical

Power Supply	100 / 120 / 220 / 240 Vac (+5%, -10%), 48-66 Hz
Operating Temperature	0 to 55 °C
Dimensions (W×H×D)	425 × 146 × 462 mm
Weight	12.3 kg

Source/Generator Specifications

Frequency Range	20 Hz to 100 kHz
Output Level Range	0.6 mV to 6 V (open circuit)
Residual Distortion & Noise (THD+N)	< 0.003% (-90 dB) from 20 Hz to 20 kHz (1 V to 6 V output)
Output Impedance	600 Ω

Distortion Measurement (THD+N)

Fundamental Frequency Range	20 Hz to 100 kHz
Measurement Range	0.001% to 100% (-100 dB to 0.0 dB)
Detection Type	True-rms

SINAD & Signal-to-Noise Measurement

Measurement Types	SINAD, Signal-to-Noise Ratio (SNR)
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AC/DC Level Measurement

AC Measurement Range	300 μV to 300 V full scale
Measurement Functions	True-rms AC volts, DC volts
Detector Types	True-rms

Frequency Measurement

Resolution	5 digits
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Input Characteristics

Input Impedance	100 kΩ shunted by < 300 pF
Maximum Input Voltage	300 V AC

Audio Filters & Weighting

Standard Low-Pass Filters	30 kHz, 80 kHz (Internal)
Optional Plug-in Filter Slots	2 slots (for CCITT, CCIR, A-Weighting, etc.)

Interfaces & Connectivity

Remote Interface	HP-IB (IEEE 488)
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General, Physical & Environmental

Storage Temperature	-55 °C to +75 °C
Power Consumption	50 VA max

Signal Source

Frequency Accuracy	±0.3% of setting
Frequency Resolution	0.3%

Analyzer Performance

DC Voltage Measurement Range	4 mV to 300 V full scale
SINAD Measurement Range	0 to 99.99 dB
Signal-to-Noise (S/N) Range	0 to 99.99 dB
Distortion Measurement Accuracy	±1 dB (20 Hz to 50 kHz)

Options

Option 013	C-Message Filter
Option 001	Rear-panel input and output connections
Option 010	400 Hz High-pass Filter
Option 017	A-Weighting Filter

Measurement Functions

Ratio Measurements	Expressed in dB or %
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Inputs & Outputs

Input Configuration	Balanced or Unbalanced (Floating or Grounded)
Output Configuration	Balanced or Unbalanced (Floating or Grounded)

TECHNOLOGY

Audio Analysis

APPLICATIONS

Audio equipment testing, transceiver testing, distortion and SINAD measurement, stimulus-response analysis

Generated by SpecAtlasHub (specatlashub.com). Specifications are compiled from available sources and are subject to change — verify critical values against the manufacturer before purchase.