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Data Sheet

August 14, 2026

HP / AGILENT

HP / Agilent 3336B Synthesis/Level Generator

HP Agilent 3336B Synthesizer Level Generator Bell The HP 3336B is the North American Bell-configuration synthesizer/level generator covering 10 Hz to 20.999999999 MHz with 11-digit resolution. Outputs include 75 ohm unbalanced and 124/135/600 ohm balanced with WECO-style connectors on many builds. Bell-system FDM loop testing, tracking source for HP 3586B selective level meters, and precision leveled sine stimulus to about 21 MHz. Frequency Range: 10 Hz to 20.999999999 MHz The HP 3336B is the North American Bell-configuration synthesizer/level generator covering 10 Hz to 20.999999999 MHz with 11-digit resolution. Outputs include 75 ohm unbalanced and 124/135/600 ohm balanced with WECO-style connectors on many builds. Bell-system FDM loop testing, tracking source for HP 3586B selective level meters, and precision leveled sine stimulus to about 21 MHz. Frequency Range: 10 Hz to 20.999999999 MHz Frequency Resolution Below 100 kHz: 1 uHz



MODEL

HP / Agilent 3336B

CALIBRATION

Available on request

CONDITION

Used

STATUS

In stock

RFQ / SKU

3336B

LISTING

<https://aumictechlabs.com/products/3336b-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The HP/Agilent 3336B Synthesis/Level Generator delivers precise, phase-continuous signal generation across multiple frequency and impedance configurations. This instrument combines synthesized frequency generation with controlled amplitude output and integrated modulation capabilities, serving research, development, and production testing environments. Its fast leveling loop enables flat amplitude response during high-speed frequency sweeps, while external

leveling options support specialized measurement setups. Technical Specifications

Frequency Generation Frequency range: 10 Hz to 20.999999 MHz (unbalanced 75 Ω); 10 Hz to 10.999999 MHz (balanced 124 Ω); 10 kHz to 10.999999 MHz (balanced 135 Ω); 200 Hz to 109.99999 kHz (balanced 600 Ω) Frequency resolution: 1 μ Hz (< 100 kHz); 1 mHz ($\geq$ 100 kHz) Frequency accuracy: $\pm 5 \times 10^{-6}$ of programmed frequency Aging rate: $\pm 5 \times 10^{-8}$ /week (with Option 804) Phase continuity maintained across full frequency range Sweep modes: Internal frequency sweep with linear or logarithmic phase-continuous operation Sweep performance: ± 0.15 dB (50 Hz to 1 MHz, 0.5 s normal leveling); ± 0.15 dB (10 kHz to 20 MHz, 0.03 s fast leveling) Amplitude Generation Output range: -71.23 to +8.76 dBm (50 Ω); -72.99 to +7.00 dBm (75 Ω , 600 Ω); -78.23 to +1.76 dBm (124 Ω , 135 Ω , 150 Ω) Amplitude accuracy: ± 0.05 dB Amplitude flatness: ± 0.05 dB (Option 005) Modulation Modes: AM, FM, Pulse AM depth: 0 to 100% (frequency range 50 Hz to 50 kHz); envelope distortion < 30 dBc at 80% modulation Phase modulation: 0° to $\pm 2850^\circ$ or 0° to $\pm 850^\circ$ (DC to 5 kHz); linearity $\pm 0.5\%$; input sensitivity ± 5 V peak for 850° shift Spectral Purity Harmonics: Below -60 dB (50 Hz to 1 MHz); below -50 dB (50 Hz to 20 MHz) Spurious signals: Below -70 dBc or -100 dBm (standard); below -115 dBm (Option 005) Integrated phase noise: -64 dB (3 kHz band, ± 2 kHz around 20 MHz carrier) Key Features Phase-continuous frequency sweep capability over all instrument ranges Fast leveling loop for amplitude stability during rapid frequency transitions Multiple output impedance configurations (50, 75, 124, 135, 150, 600 Ω) Optional high-stability frequency reference for reduced aging External leveling control for custom applications Typical Applications Telecommunications system characterization Production testing and calibration Research and development signal sourcing System integration and validation Compatibility & Integration The 3336B accommodates standard 50 Ω laboratory configurations alongside specialized impedances, enabling integration into diverse test architectures without external impedance matching.

3336B Characteristics / Specifications

PARAMETER	VALUE
Frequency Range	10 Hz to 20.999999999 MHz
Frequency Resolution Below 100 kHz	1 uHz
Frequency Resolution Above 100 kHz	1 mHz
Frequency Accuracy Class	plus or minus 5e-6 of programmed frequency
Output Impedance Unbalanced	75 Ohm
Output Impedance Balanced	124 Ohm 135 Ohm 600 Ohm
Frequency Span 75 Ohm	10 Hz to 20.999999999 MHz
Frequency Span 124 Ohm Class	10 Hz to 10.999999999 MHz
Frequency Span 135 Ohm Class	10 kHz to 10.999999999 MHz
Frequency Span 600 Ohm Class	200 Hz to 109.99999 kHz
Output Level 75 and 600 Ohm	minus 72.99 to +7.00 dBm
Output Level 124 and 135 Ohm	minus 78.23 to +1.76 dBm
Amplitude Accuracy Class	plus or minus 0.05 dB absolute at specified reference
Amplitude Step	0.01 dBm
Linear Sweep Time	0.01 s to 99.99 s
Auxiliary Output Frequency Class	21 MHz to 60.999999999 MHz at 0 dBm
AM Depth	0 to 100 percent
PM Rate	DC to 5 kHz
Storage Registers	10
Remote Interface	HP-IB
External Reference Input	1 MHz to 10 MHz
Form Factor	Benchtop synthesizer level generator

3336B Specifications

PARAMETER	VALUE
HP Agilent 3336B Synthesizer Level Generator Bell	Overview
Applications	Bell-system FDM loop testing, tracking source for HP 3586B selective level meters, and precision leveled sine stimulus to about 21 MHz.
Phase continuous linear and log sweep	Precision 0.01 dB level steps
Technical Specifications	Frequency Range: 10 Hz to 20.999999999 MHz
Notes	Specs from HP 3336 Operating and Service Manual tables for Model 3336B and Bell output range summaries.

Full OEM specifications

Complete technical content extracted from the manufacturer datasheet. Sparse OEM tables are reconstructed as tables below; other text is preserved as paragraphs.

Specifications	
Specifications	
PARAMETER	VALUE
Frequency Range	10 Hz to 20.999999999 MHz
Frequency Resolution Below 100 kHz	1 uHz
Frequency Resolution Above 100 kHz	1 mHz
Frequency Accuracy Class	plus or minus 5e-6 of programmed frequency
Output Impedance Unbalanced	75 Ohm
Output Impedance Balanced	124 Ohm 135 Ohm 600 Ohm
Frequency Span 75 Ohm	10 Hz to 20.999999999 MHz
Frequency Span 124 Ohm Class	10 Hz to 10.999999999 MHz
Frequency Span 135 Ohm Class	10 kHz to 10.999999999 MHz
Frequency Span 600 Ohm Class	200 Hz to 109.99999 kHz
Output Level 75 and 600 Ohm	minus 72.99 to +7.00 dBm
Output Level 124 and 135 Ohm	minus 78.23 to +1.76 dBm
Amplitude Accuracy Class	plus or minus 0.05 dB absolute at specified reference
Amplitude Step	0.01 dBm
Linear Sweep Time	0.01 s to 99.99 s
Auxiliary Output Frequency Class	21 MHz to 60.999999999 MHz at 0 dBm
AM Depth	0 to 100 percent
PM Rate	DC to 5 kHz
Storage Registers	10
Remote Interface	HP-IB
External Reference Input	1 MHz to 10 MHz
Form Factor	Benchtop synthesizer level generator
Option 004: Oven reference	
Option 005: High accuracy attenuator	
Notes	
Specs from HP 3336 Operating and Service Manual tables for Model 3336B and Bell output range summaries.	

Available from Aumictech

Used and refurbished unit evaluated in-house. Calibration: Available on request. Used · In stock.

Request a quote: sales@aumictech.com · +1 (484) 841-9341

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Technical content from manufacturer specifications. Unit photo/stock from Aumictech listing when available. Specifications subject to OEM documentation and unit condition.