

**Aumictech**

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Data Sheet

August 13, 2026

INSTEK

Instek GFG-8216A Function Generator

Key Features - Built-in 6-digit INT/EXT counter (not on GFG-8215A) - Separate TTL and CMOS outputs - External voltage-controlled frequency (VCF) - Two-step attenuator plus variable level - Duty-cycle control with signal inversion capability - No sweep/AM/FM (those are 8217A/8219A/8255A) Technical Specifications Model: GFG-8216A Manufacturer: GW Instek Instrument Type: Function generator with frequency counter Series: GFG-8200A Alias: GFG8216A Frequency range: 0.3 Hz to 3 MHz, 7 ranges Amplitude: greater than 10 Vpp into 50 ohm Output impedance: 50 ohm $\pm 10\%$ Attenuator: $-20\text{ dB} \pm 1\text{ dB} \times 2$ DC offset: less than -5 V to greater than $+5\text{ V}$ into 50 ohm Duty control: 80%:20%:80% continuously variable to 1 MHz Display: 6 digit LED Sine distortion: 1% or less, 0.



MODEL Instek GFG-8216A	CALIBRATION Available on request
CONDITION Used	STATUS In stock
RFQ / SKU GFG-8216A	LISTING https://aumictechlabs.com/products/gfg-8216a-2/

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Instek GFG-8216A is a compact analog function generator delivering precise waveform synthesis across a 0.3 Hz to 3 MHz range. Built for laboratory and field service work, it combines straightforward controls with integrated measurement capability, offering sine, triangle, square, ramp, TTL, and CMOS outputs with selectable sweep modes and modulation flexibility. Technical Specifications Frequency and Waveform Generation Frequency range: 0.3 Hz to 3 MHz Waveforms: Sine, triangle, square, ramp, TTL output, CMOS output Sweep modes: Logarithmic

and linear Duty cycle: Adjustable 80% to 20% up to 1 MHz with signal inversion Square wave rise/fall time: 120 ns typical Square wave symmetry: 100 ns at maximum output into 50Ω load Output Characteristics Amplitude: Greater than 10 Vpp into 50Ω load Output impedance: 50Ω ±10% Attenuation: Two-step (-20 dB × 2) plus variable attenuator DC offset: Variable, -5 V to greater than 5 V into 50Ω load Distortion: Low distortion across waveform set Modulation and Control AM and FM modulation modes with internal or external control Voltage controlled frequency (VCF): External modulation input to 15 V DC Integrated Frequency Counter 6-digit LED display Internal measurement and external function to 150 MHz Sensitivity: 35 mVrms (5 Hz to 100 MHz); <45 mVrms (100 MHz to 150 MHz) Counter input impedance: 1 MΩ // 150 pF Time base accuracy: ±20 ppm at 23°C ±5°C after 30-minute warm-up Resolution: 100 nHz minimum for 1 Hz measurement; 1 Hz minimum at 100 MHz Power and Environment Supply: AC 115 V / 230 V ±15%, 50/60 Hz Dimensions: 251 mm W × 91 mm H × 291 mm D Weight: 2.1 kg Operating temperature: 0°C to 40°C Storage temperature: -10°C to 70°C Relative humidity: 80% maximum Key Features Fast square wave edges enable precision timing and trigger applications Programmable duty cycle supports custom pulse generation up to 1 MHz Independent attenuator stages reduce measurement errors across dynamic range Built-in counter eliminates need for external frequency measurement equipment VCF input allows external control of output frequency for swept testing Typical Applications Component characterization, circuit timing validation, audio equipment testing, signal integrity analysis, prototype validation, educational laboratory work. Compatibility & Integration Standard 50Ω output impedance ensures compatibility with RF test systems, oscilloscope inputs, and amplifier chains. TTL and CMOS outputs support direct logic circuit interfacing.

Features & description

From manufacturer datasheet

Features

- Built-in 6-digit INT/EXT counter (not on GFG-8215A) • Separate TTL and CMOS outputs • External voltage-controlled frequency (VCF) • Two-step attenuator plus variable level • Duty-cycle control with signal inversion capability • No sweep/AM/FM (those are 8217A/8219A/8255A)

GFG8216A Characteristics / Specifications

PARAMETER	VALUE
Model	GFG-8216A
Manufacturer	GW Instek
Instrument Type	Function generator with frequency counter
Series	GFG-8200A
Alias	GFG8216A
Frequency range	0.3 Hz to 3 MHz, 7 ranges
Amplitude	greater than 10 Vpp into 50 ohm
Output impedance	50 ohm $\pm 10\%$
Attenuator	-20 dB ± 1 dB x 2
DC offset	less than -5 V to greater than +5 V into 50 ohm
Duty control	80%:20%:80% continuously variable to 1 MHz
Display	6 digit LED
Sine distortion	1% or less, 0.3 Hz to 200 kHz (MAX to 1/10 level)
Sine THD	35 dB or more below fundamental in all ranges
Sine flatness	less than 0.3 dB, 0.3 Hz to 300 kHz; less than 0.5 dB, 300 kHz to 3 MHz
Triangle linearity	98% or greater, 0.3 Hz to 100 kHz; 95% or greater, 100 kHz to 3 MHz
Square symmetry	$\pm 2\%$, 0.3 Hz to 100 kHz
Square rise fall	100 ns or less at maximum output into 50 ohm
CMOS level	4 Vpp ± 1 Vpp to 14.5 Vpp ± 0.5 Vpp, adjustable
CMOS rise fall	120 ns or less
TTL level	3 Vpp or greater
TTL fan out	20 TTL loads
TTL rise fall	25 ns or less
VCF input voltage	0 V to 10 V ± 1 V (100:1)
VCF input impedance	10 kohm $\pm 10\%$

PARAMETER	VALUE
Counter mode	INT/EXT switch
Counter INT range	0.3 Hz to 3 MHz
Counter EXT range	5 Hz to 150 MHz
Counter accuracy	timebase accuracy ± 1 count
Timebase	± 20 ppm (23 ± 5 C) after 30 minutes warm-up
Counter resolution	100 nHz maximum at 1 Hz; 1 Hz at 100 MHz
Counter input impedance	1 Mohm // 150 pF
Counter sensitivity	35 mVrms or less (5 Hz to 100 MHz); 45 mVrms or less (100 MHz to 150 MHz)
AC power	115 V / 230 V $\pm 15\%$, 50/60 Hz
Dimensions	251 mmWx 91 mmHx 291 mmDWeight: approximately 2.1 kg
Accessories	power cord, user manual, GTL-101 $\times 2$
Spec condition	30 minutes warm-up, +20 C to +30 C

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	
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Instrument Type	Function generator with frequency counter
Series	GFG-8200A
Alias	GFG8216A
Frequency range	0.3 Hz to 3 MHz, 7 ranges
Amplitude	greater than 10 Vpp into 50 ohm
Output impedance	50 ohm ±10%
Attenuator	−20 dB ±1 dB x 2
DC offset	less than −5 V to greater than +5 V into 50 ohm
Duty control	80%:20%:80% continuously variable to 1 MHz
Display	6 digit LED
Sine distortion	1% or less, 0.3 Hz to 200 kHz (MAX to 1/10 level)
Sine THD	35 dB or more below fundamental in all ranges
Sine flatness	less than 0.3 dB, 0.3 Hz to 300 kHz; less than 0.5 dB, 300 kHz to 3 MHz
Triangle linearity	98% or greater, 0.3 Hz to 100 kHz; 95% or greater, 100 kHz to 3 MHz
Square symmetry	±2%, 0.3 Hz to 100 kHz
Square rise fall	100 ns or less at maximum output into 50 ohm
CMOS level	4 Vpp ±1 Vpp to 14.5 Vpp ±0.5 Vpp, adjustable
CMOS rise fall	120 ns or less
TTL level	3 Vpp or greater
TTL fan out	20 TTL loads
TTL rise fall	25 ns or less
VCF input voltage	0 V to 10 V ±1 V (100:1)
VCF input impedance	10 kohm ±10%

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Notes

Specs from GW Instek GFG-8200A series specification sheet (GFG-8215A/8216A/8217A/8219A column). Confirm this is GFG-8216A with counter and without sweep/AM/FM. Related: GFG-8215A (no counter display), GFG-8250A/8255A (0.5 Hz to 5 MHz).

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

Aumictech

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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.